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A STRATEGIC PLAN FOR MANAGEMENT OF MONTANA'S FISH, WILDLIFE, AND PARKS RESOURCES

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State of Montana – Ted Schwinden, Governor
Fish and Game Commission – Spencer S. Hegstad, Chairman
Department of Fish, Wildlife & Parks – James W. Flynn, Director

Acknowledgements

We are indebted to a great many people who contributed long hours of work to provide the information for this plan.

At regional workshops Department employees offered valuable ideas and suggestions. Regional supervisors evaluated and ranked strategies for all Department programs. Administrators assessed regional information from a statewide perspective. The Director's staff reviewed contributions from all levels in the Department as well as those from outside.

A draft of the Strategic Plan was distributed for public review June 15 to August 31, 1985. Statewide distribution included 750 copies to: 90 sportsmen's clubs, 33 agricultural groups, 61 conservation districts, 33 federal and state agencies, 23 business organizations, 12 guides and outfitters, 15 conservation groups, 150 legislators, 128 libraries, 5 ski clubs, and 200 individuals.

Fifty-four written responses were received. Nearly half (44 percent) of the respondents commended the Department for implementing a planning process or made favorable comments about the Draft Plan. Major responses (six or more in any category) mentioned concern for: management of certain species of wildlife, public access, increasing use of private land, impact of land uses on habitat, preferential licenses for outfitters, use of license money, recognition of increasing demands, need for big game winter range, cross country skiing facilities, game damage, and level of development in state parks.

Preparation of the final version of the Plan was coordinated by Bill Phippen. Barbara Lien of the Department of Natural Resources and Conservation did the layout, and Peggy Todd of DNRC edited the Plan.

We especially appreciate any information and constructive criticism from our fellow fish, wildlife and parks enthusiasts. Without their support there would be no plan and no "Design for Tomorrow."

FOREWORD

Fishing, hunting, camping, and other outdoor recreation opportunities are an important part of Montana's heritage. Montanans appreciate the out-of-doors, and participate in a variety of outdoor activities. Many visitors come from other states to share the recreational opportunities here.

Public concern for Montana's natural resources has resulted in a variety of laws that protect the environment and our fish, wildlife, recreational and cultural values. Continued public and legislative support is essential to protect and wisely manage

Montana's fish, wildlife and recreational resources.

The more developed and densely populated states illustrate how intensified land uses and crowding can diminish natural amenities. Montana's fish, wildlife, and associated recreational opportunities are likewise susceptible--unless these resources and their social and economic values are adequately considered in land-use decisions.

The Department, to improve its effectiveness and efficiency, has adopted a long-range

comprehensive planning process. We're seeking ways to improve our decision-making process to guide our future direction and to ensure the best allocation of public dollars on behalf of the resources. This plan presents the goals and objectives we believe will best serve the state's resources and the public. Major problems are identified and alternative solutions proposed.

We appreciate the public input received while we were developing this strategic plan that will guide our programs during the last half of the 1980s.

JAMES W. FLYNN, DIRECTOR
MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS

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INTRODUCTION

DEPARTMENT RESPONSIBILITIES

The Montana Department of Fish, Wildlife and Parks, under the direction of the Fish and Game Commission, is legally responsible for managing the state's fish, wildlife and recreational resources.

Specific laws address the protection, preservation and propagation of game species; seasons and regulations for fishing and hunting; protection of habitat, and preservation of nongame animals. Two sections of the law provide assent to the Acts of Congress that provide funds for fisheries (Dingell-Johnson Act) and wildlife (Pittman-Robertson Conservation Act). Department responsibilities for protection of stream habitat are set forth in the Stream Preservation Act and the Natural Streambed and Land Preservation Act.

The Department is responsible for a state park system that includes scenic, historical, cultural and recreational resources. It also administers the Land and Water Conservation Fund that supports outdoor recreational activities.

Other legal responsibilities include boat registration, water safety, litter control,

snowmobile regulations, trespass laws and public safety. State laws that influence department activities include the Montana Environmental Policy Act, Flood Plain Law, Strip Mining and Utility Siting Act, subdivision laws, Water Use Act, Water Quality Act, Pesticide Act, Lakeshore Protection Act, and Renewable Resource Development Act.

Montanans' concern for the environment and natural resources is also reflected in the state's constitution. The Constitution, as revised in 1972, provides that:

"The state and each person shall maintain and improve a clean and healthful environment in Montana for present and future generations....The legislature shall provide adequate remedies for the protection of the environmental life support system from degradation and provide adequate remedies to prevent unreasonable depletion and degradation of natural resources."

This constitutional provision and the associated laws form the basis for department policies on resource protection and

recreational opportunities. The Department's mission is to carry out these legal mandates and policies.

A five-member Fish and Game Commission provides policy to the Department for resource management, seasons, use of lands owned or controlled by the Department, and budget allocation. Commission members are appointed by the Governor. Three members are appointed to serve terms concurrent with the gubernatorial term, and two members are appointed in January of the third year of the gubernatorial term. Each member is from one of five geographical areas of the state.

DEPARTMENT GOAL

To benefit the people by conserving fish, wildlife, and the natural environment and to provide quality outdoor recreational opportunities that:

- (1) are consistent with the capabilities and requirements of the resources.
- (2) recognize present and future human needs and desires.
- (3) ensure maintenance or enhancement of the environment.

MONTANA--NOW AND TOMORROW

Montana's total area exceeds 140,000 square miles. It is the fourth largest of the 50 states. Elevations range from 1,900 to 12,850 feet.

The varying topography and land types in Montana provide habitats for a broad range of fish and wildlife species and afford many recreational opportunities. The topography ranges from mountainous terrain and foothills in the western part of the state to large expanses of prairie in the eastern part of the state. There are more than 600 species of fish and wildlife in the state. Some species are found in every square mile of the state. Some of these species provide fishing and hunting; many others add to our enjoyment of the outdoors.

Nearly two-thirds of the state is private land. The federal government administers 30% of the state's land; state government 6%. The Department administers less than one half of one percent of the state's land.

Agriculture is Montana's primary land use, and more than 80% of the state's land area is used for farming or ranching. About 25% of the state is forested. Logging and wood products manufacturing are major industries. Montana is underlaid by vast coal reserves and significant quantities of oil and natural gas. National demands for food, fiber, and energy are expanding those major uses of Montana's land and water resources.

Montana's population is exceeded by 40 states. There were 746,000 residents in 1975

and 804,100 in 1982. The state's population has been projected to be 859,000 by 1990.

High quality outdoor recreation with diverse choices plays an important role in the lives of most Montanans. A national survey determined that more than 40% of Montana's residents who were over 15 years of age purchased a fishing or hunting license in 1980. An undetermined number of juveniles who do not need a license also fished. In addition, 75% of residents participate in some other form of outdoor recreation. Fishing and hunting also attract large numbers of nonresidents each year.

Current license sales and recreational use data indicate that high participation rates will increase through the 1980s. In addition to the recreational opportunities that enhance our lives, the state also realizes substantial economic benefits from the recreation and tourist industry.

NEED FOR PLANNING

Montana is in an era of increasing competition for the land and water that supports fish, wildlife and recreational resources. The Department's responsibilities will become increasingly complex. The future of these valuable resources and use of them will depend upon the Department's role as their primary spokesman. Responding to that challenge, the Department has developed a comprehensive planning process that will aid decision-making and increase the efficiency and effectiveness of Department programs.

PLANNING PROCESS

The planning process is a goal-oriented system for developing objectives and strategies to address specific problems and for evaluating the progress and accomplishments of our programs.

The process is composed of four phases:

- (1) an inventory that assesses the current status of the resource and its use;
- (2) a strategic phase that formulates objectives and strategies;
- (3) an operational phase that links the strategic plan to the budgeting process through individual projects and
- (4) the evaluation phase that measures progress and effectiveness.

After public review, this Strategic Plan will guide our programs during the last half of the 1980s.

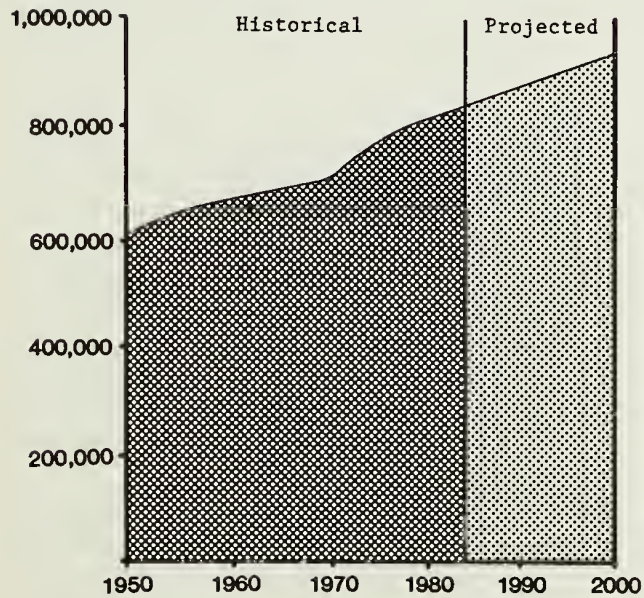
PLAN IMPLEMENTATION

The Strategic Plan acts as an umbrella document for the Department's management system. The strategies in this plan are the links between our objectives and our field activities. Subsequent Operational Plans will cover specific projects and work plans.

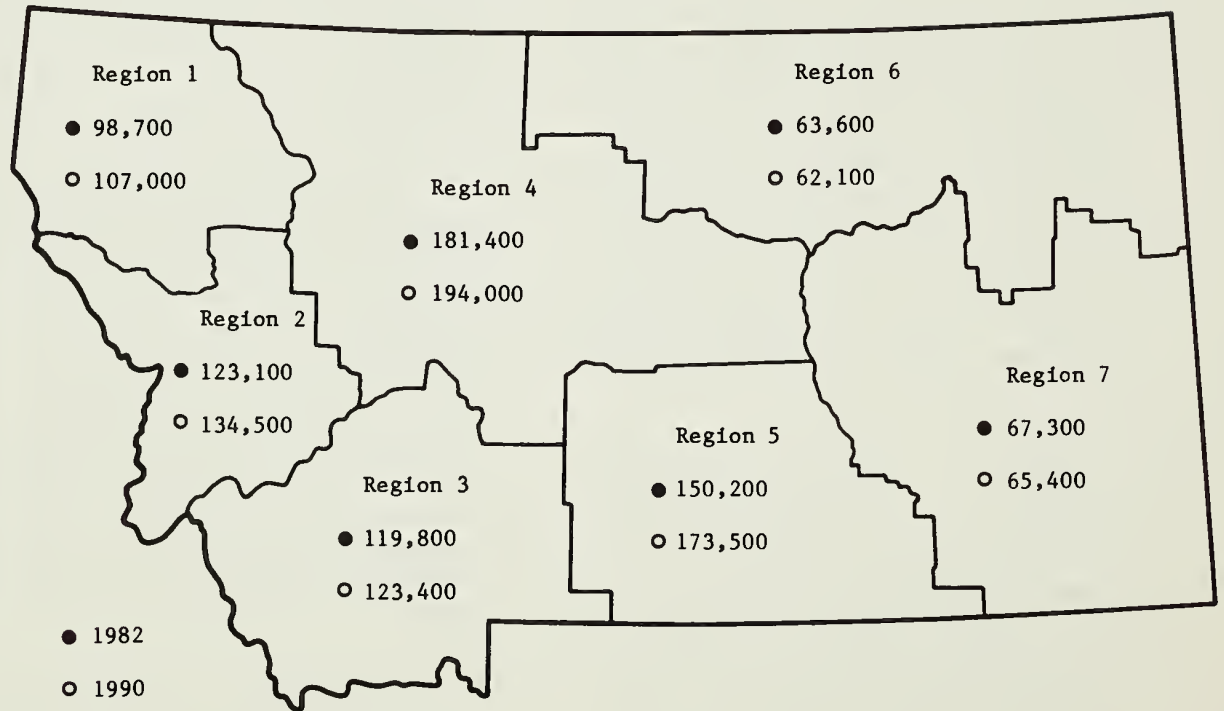
Projects and work plans are selected to direct emphasis toward high priority strategies. New emphasis and redirection are accomplished on a biennial basis through the statewide biennial budgeting process, Executive Planning Process (EPP) and Capital program (lands, facilities, and equipment).

Montana Human Population Trends and Projections

STATEWIDE (1950-1990)



REGIONAL (1982-1990)



Progress toward Strategic Plan objectives will be measured annually through use/harvest surveys, annual license sales, and ongoing inventories of animal populations, habitat conditions and site evaluations. The results of these surveys and inventories will be compared to plan objectives. Progress toward objectives will be evaluated annually. Project evaluations will indicate which projects and activities have the most benefit for the state's resources and people.

A cost-tracking system will determine how department funds are used in relation to program accomplishments.

In the future the Department will ...

- (1) ... continue to serve as the primary spokesman for fish and wildlife resources in land- and water-use decisions. Evaluations of animal populations provide the basis for that effort. We will continue to work with other agencies and the private sector to minimize the impacts of intensifying land and water uses on fish and wildlife. We're acquiring key habitat areas where appropriate.
- (2) ... acquire, develop and maintain scenic, scientific, historic, recreational and cultural areas representative of Montana's heritage. We will emphasize development and improvement of existing sites.
- (3) ... expand fishing, hunting and recreational opportunities to meet the increasing need for quality recreation. We will improve our capability to manage fish and wildlife and to provide the

best recreational opportunities. We will ensure that: fish and wildlife are not overharvested; a diversity of high quality recreational opportunities are provided; and negative impacts of wildlife are minimized.

- (4) ... inform the public about resource issues and encourage public participation in decisions that affect fish, wildlife and parks. We will also increase our efforts to explain department policies and programs to the public.
- (5) ... continue efforts to reduce illegal activities and increase public safety through education and new enforcement techniques. We will identify the effects of illegal uses of fish and wildlife and vandalism. Special enforcement efforts will be directed to problem areas.
- (6) ... continue to improve the availability of fishing and hunting opportunities on private and public land. We will: (1) strive to improve relations between sportsman and landowners while recognizing the key role of private land as fish and wildlife habitat. (2) stress the responsibilities and privileges of public use on private land; (3) protect private property while improving public access; (4) acquire access in key areas through purchase or easements; (5) work with land management agencies to improve access to public lands.
- (7) ... investigate and evaluate the economic and social values of Montana's fish and wildlife. A clear understanding of these values is

essential because fish and wildlife must compete with other land uses for limited resources. Economic data will provide a basis for mitigation where fish and wildlife losses occur.

- (8) ... recognize the interest in nongame wildlife expressed by the public and incorporate nongame into management programs. We will work with interested organizations to develop funding sources for nongame projects.
- (9) ... emphasize wild fish populations in fish management programs. We will plant hatchery-reared fish to support recreational fishing in waters that lack adequate spawning for gamefish. We will take precautions to avoid negative effects on wild populations and strive to enhance our warmwater fisheries program.
- (10) ... develop a statewide game damage policy and action program to minimize impacts on private land and use hunting as the primary management option.
- (11) ... increase our management of rivers to provide the most recreational opportunity with the least impact on resources and landowners. We will continue to emphasize instream flows needed to maintain fisheries and to meet our responsibilities under Montana statutes.
- (12) ... find new and stable sources for the Parks Program to replace decreasing revenue from the state's general fund and the federal Land and Water Conservation Fund.
- (13) ... make recommendations to preserve and enhance fish and wildlife populations where land use changes are proposed.



FISH PROGRAM

Game Fish in Streams

Elements: Salmonids in Streams

Cool and Warm Water Fish in Streams

Game Fish in Lakes

Elements: Salmonids in Lakes

Cool and Warm Water Fish in Lakes

Aquatic Nongame

Elements: Nongame Fish and Other Aquatic Animals



FISH PROGRAM

GOAL: To preserve and perpetuate all aquatic species and their ecosystems and to meet the public demand for fish in state waters.

STATUS. Montana waters support 80 species of fish, 16 species of amphibians, and an undetermined number of invertebrate species. The Department manages, protects, and propagates fish and other aquatic animals. Current responsibilities include protection of all aquatic species and their habitats in addition to meeting the needs of fishermen.

MANAGEMENT. The Department's management policies have emphasized wild fish and the habitat necessary to maintain those populations. Protection of those renewable resources will continue to play a major role in the fish management program.

Regulations have been liberal in the past but, as use has increased, restrictions have been applied to avoid overharvest and to maintain high-quality fisheries.

The Department operates eight hatcheries that provide fish to supplement wild populations for recreational fishing. Currently 98% of the fish produced at these stations are planted in lakes and ponds where natural reproduction is limited or lacking. Most

streams have adequate natural reproduction and are not planted because planting harms wild trout populations. A warmwater hatchery has been acquired to provide walleyes, northern pike, bass and panfish for lakes in eastern Montana.

Much of the fishing is in waters bordered by private land. The Department has purchased fishing access sites on important waters since 1954 to improve availability and to minimize angler/landowner problems. License money and other fishery management funds have supported these purchases.

License sale records indicate that about 241,700 residents purchased fishing licenses in 1984. Nonresident sales have fluctuated in recent years, but the trend has been toward increased nonresident use. In 1984 there were 85,870 nonresident anglers in Montana.

Total angler use during the 1984 season was 2,984,000 days--about evenly divided between streams and lakes (Table 1). Residents accounted for about 80% of the use (Table 2) and 90% of the fishing occurred on trout waters.

Commercial fishing for designated species has been permitted for many years. These commercial fisheries are limited to a few waters and are closely monitored.

FUTURE. Montana's increasing population and the high level of interest in fishing opportunities indicate that angler use will continue to increase. Attainment of objectives will depend on the Department's ability to deal with major problems that affect aquatic habitat and resources.

Aquatic habitat is deteriorating because of expanding and intensifying land and water uses. Sport fish populations will decline as this trend continues.

Recreational fishing is steadily increasing. We need innovative management strategies to meet the demand for high-quality fishing opportunities and to avoid overharvest.

Recreational fishing is limited in some waters by restricted access due to land ownership, legal constraints or distance from population centers. We will continue our



policy of acquiring key access sites to meet fishermen's needs and to minimize impacts on private land.

Some fish management programs fail because of insufficient public understanding and support. We need to increase our efforts to inform and involve the public on resource issues.

Information is lacking regarding the level of compliance with license requirements and fishing regulations. We need to evaluate that compliance to provide an equitable distribution of fishing opportunities.

TABLE 1. REGIONAL DISTRIBUTION OF FISHING PRESSURE BY WATER TYPE

(Angler days in 1000s)

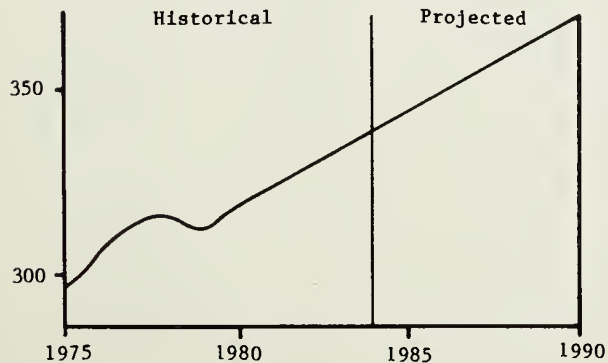
<u>Region</u>	<u>Streams</u>	<u>Lakes</u>
1	205 (13%)	361 (17%)
2	261 (17%)	161 (11%)
3	473 (30%)	328 (23%)
4	273 (18%)	336 (23%)
5	193 (13%)	128 (9%)
6	50 (4%)	120 (8%)
7	68 (5%)	27 (2%)
TOTAL	1,523	1,461

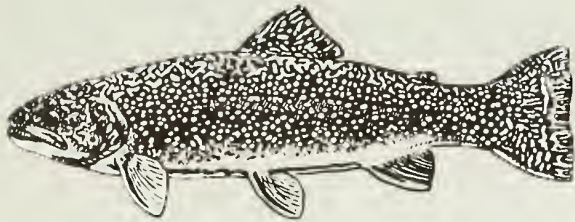
TABLE 2. REGIONAL DISTRIBUTION OF FISHING PRESSURE BY LICENSE TYPE

(Angler days in 1000s)

<u>Region</u>	<u>Residents</u>	<u>Nonresidents</u>
1	470 (19%)	96 (17%)
2	347 (14%)	75 (13%)
3	536 (22%)	265 (47%)
4	551 (22%)	58 (10%)
5	269 (11%)	52 (9%)
6	165 (8%)	5 (1%)
7	81 (4%)	14 (3%)
TOTAL	2,419	565

LICENSED ANGLERS (1000s)





Salmonids in Streams

OBJECTIVES BY 1990: To preserve or enhance the habitat in 4,200 miles of streams that support wild trout and other salmonids.

To provide 1,531,500 days of fishing; an increase of 12% over the use in 1984.

To manage these species for scientific and aesthetic purposes, and for their inherent value.

STATUS. Salmonids include all species of trout, char, salmon, grayling and whitefish. Five species of trout reside in Montana streams, mostly in the western half of the state. The arctic grayling occurs in limited numbers in about 25 streams. The stream fishery for kokanee (salmon) is on migrating spawners. The salmon fisheries are in tributary streams or canals entering lakes that support substantial kokanee populations. The mountain whitefish is widely distributed in large rivers and tributaries.

Trout populations have been estimated on about 5% of the Salmonid streams. Estimates on the major streams range from 700-3000 catchable-sized fish per mile. Trout numbers range from less than 100 to 600 catchable-sized fish per mile in the smaller tributaries. Whitefish equal or exceed trout numbers in some waters.

Intensive land and water use and an increasing human population have taken a toll on these streams through pollution, channel alteration and dewatering. The trend will continue. Several recently enacted laws afford some protection through increased emphasis on fishery values.

MANAGEMENT. The management of trout populations in streams has been based on wild fish that are produced naturally in the streams. Considerable effort is needed to enhance and preserve habitat if trout populations are to be maintained or increased. Efforts will be made to prevent further declines in the abundance or distribution of stream-dwelling grayling. Kokanee management in streams will maintain suitable spawning for salmon and provide an opportunity for anglers to harvest surplus salmon from the fall spawning runs.

Fishing regulations have been liberal in the past, but restrictions have been imposed in recent years to maintain quality on the heavily fished streams. Continued evaluation of use and harvest will indicate the effectiveness of current regulations and the need for additional regulation on other streams.

Stream fishing for trout is popular with both residents and nonresidents. The nonresidents show the greatest preference for stream trout fishing. The larger, more productive streams are well known and receive a large share of the use.

OBJECTIVES BY 1990

<u>REGION</u>	<u>YEAR</u>	<u>ANGLER DAYS</u>
1	1984	204,500
	1990	229,000
2	1984	261,200
	1990	290,500
3	1984	472,100
	1990	530,500
4	1984	242,700
	1990	274,000
5	1984	167,200
	1990	187,400
6	1984	16,700
	1990	19,400
7	1984	600
	1990	600
STATEWIDE	1984	1,365,000
	1990	1,531,400



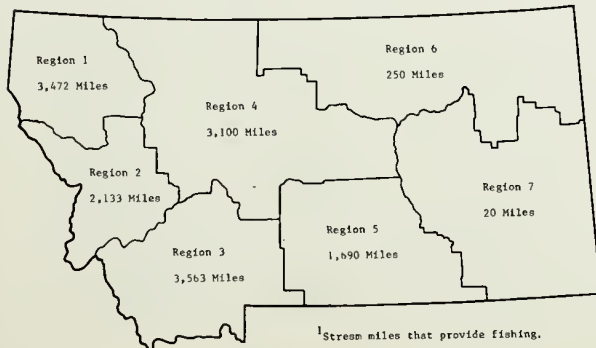
Current angler use on these streams is 1,365,000 days per year (46% of statewide total). Based on recent increases in license sales, use is expected to reach 1,531,500 days in 1990.

Most of the rivers and streams flow through private land. Public fishing areas have been purchased on many prime streams with license money and other fishery management funds.

FUTURE. Trout fishing in streams will continue to be an important part of the recreational fishery. Future recreational fishing will depend on how well stream habitat can be maintained and enhanced.

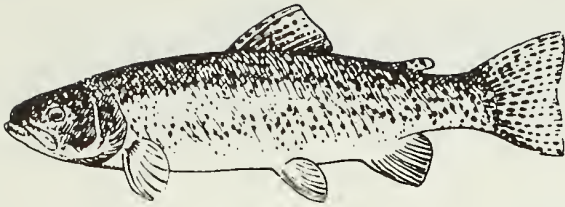
License sales records indicate that we can expect increasing angler use on trout streams. As use increases, regulations may become more restrictive on some waters to maintain quality and provide for an equitable distribution of fishing opportunity. Continued acquisition of key access areas is important.

REGIONAL DISTRIBUTION OF STREAMS¹



PROBLEMS	Priority by Region							STATE
	1	2	3	4	5	6	7	
Aquatic habitat is adversely affected by a variety of land and water uses.	3	1	1	2	1	3	-	1
The stream fishery cannot be expanded to meet growing demand for wild fish.								
Access to streams is limited by land ownership, legal constraints and distance from population centers.								
Needs of the fishery resource aren't adequately considered in the plans of government agencies.								
Compliance level with fishing regulations is not known.								
Establish instream flow reservations.								
Enforce laws relating to channel alterations.								
Determine economic value of fishing and preferences of anglers.								
Encourage maintenance and enforcement of water quality standards.								
Develop policy and action plan for conservation of species of special concern.								
Monitor fish populations to improve data base.								
Measure harvest and use by anglers.								
Determine fishing access needs and acquire access sites through easements or purchase.								
Represent fishery interests in water adjudications.								
Encourage beneficial flood plain management practices.								
Identify effects of water developments on stream fisheries.								
Participate in land and water-use planning.								
Encourage sportsmen to take an active role in resource issues.								
Evaluate compliance with Fish and Game laws.								

Salmonids in Lakes



STATUS. Salmonids (all species of trout, char, salmon, grayling and whitefish) occur in lakes throughout the state. Each administrative region has some salmonid lakes, but a large portion of the waters and the total acreage are in the central and western half of the state. Trout ponds in eastern Montana add to the diversity of fishing opportunity in many communities.

Seven species of trout occur in these lakes. Kokanee have been planted extensively and have established reproducing populations in several lakes and reservoirs. Grayling are found in about 50 lakes in the western half of the state.

Habitat deterioration has influenced salmonid species throughout their range. Recently enacted laws provide protection for these fish and their habitat through improved pollution control and constraints on bank alteration. Continued vigilance and enforcement of laws is essential to protect the fisheries.

MANAGEMENT. Management of these lakes is based on wild fish populations where natural

OBJECTIVES BY 1990: To preserve or enhance the habitat in 1,894 Montana lakes and reservoirs that support salmonids.

To provide 1,446,900 days of fishing; an increase of 12% over use in 1984.

To manage these species for scientific and aesthetic purposes and for their inherent value.

spawning occurs. But some lakes do not have adequate spawning in tributary streams, so hatchery-reared fish are planted to support recreational fishing.

Fishing regulations are liberal to allow the maximum fishing opportunity that doesn't harm basic fish stock and to provide optimal use of planted fish. Year-round fishing is permitted on many lakes with some restrictions to protect spawning fish, to conserve wild fish stocks, or to ensure public safety.

Access sites have been acquired on many of these lakes to improve availability for anglers and to minimize landowner/sportsmen problems.

FUTURE. Current use is 1,303,200 days (43% of statewide total) and is expected to reach 1,446,900 days by 1990. Residents account for 80% of the fishing on these lakes.

Management procedures can be changed on some lakes to provide additional fishing opportunities. These changes can meet the anticipated needs in all regions except

OBJECTIVES BY 1990

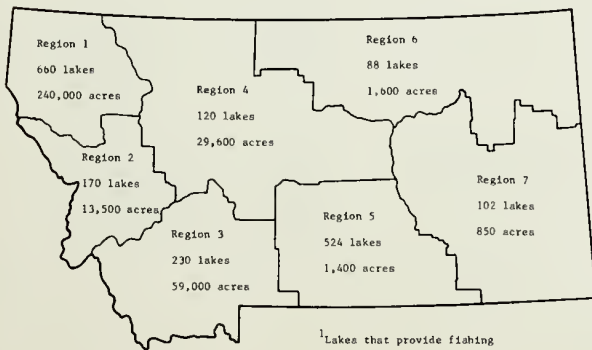
<u>REGION</u>	<u>YEAR</u>	<u>ANGLER DAYS</u>
1	1984	350,500
	1990	389,600
2	1984	160,800
	1990	165,700
3	1984	320,700
	1990	362,000
4	1984	311,400
	1990	349,800
5	1984	104,100
	1990	115,800
6	1984	49,200
	1990	54,700
7	1984	6,500
	1990	9,300
STATEWIDE	1984	1,303,200
	1990	1,446,900



Region 5. That region has many mountain lakes but few lowland lakes that can support additional fishing. The lowland lakes in Region 5 are currently managed and used at maximum capacity.

Recent successes with select strains of trout indicate that self-sustaining populations can be established or improved in some lakes and reservoirs. Selected strains will play an increasing role in the future management of trout lakes.

REGIONAL DISTRIBUTION OF LAKES¹



PROBLEMS
Aquatic habitat is adversely affected by a variety of land and water uses.

Demand for lake fishing is increasing.

Needs of fishery resource aren't adequately considered in the plans of government agencies.

Increased public involvement is needed in resource issues.

Compliance level with fishing regulations is not known.

Access to lakes is limited by land ownership, legal constraints, and distance from population centers.

STRATEGIES
Expand efforts to monitor fish populations and habitat conditions in lakes.

Encourage enforcement of laws regarding lake shore development and water quality.

Determine economic value of fishing and preferences of anglers.

Implement Northwest Power Planning Council's Fishery Program.

Represent fishery interests in state water adjudications.

Measure angler harvest and use by anglers.

Evaluate the impact of various strains of hatchery stock on lake fisheries.

Participate in land- and water-use planning that affects lake fisheries.

Inform the public regarding resource issues.

Evaluate compliance with fish and game laws.

Determine access needs and acquire access sites through easements or purchases.

	Priority by Region							STATE
	1	2	3	4	5	6	7	
Expand efforts to monitor fish populations and habitat conditions in lakes.	1	1	1	1	2	5	1	1
Encourage enforcement of laws regarding lake shore development and water quality.	3	4	6	8	8	10	-	6
Determine economic value of fishing and preferences of anglers.	6	6	5	5	7	9	-	5
Implement Northwest Power Planning Council's Fishery Program.	5	11	-	-	-	-	-	7
Represent fishery interests in state water adjudications.	9	10	10	10	9	4	-	11
Measure angler harvest and use by anglers.	4	3	4	3	3	7	2	4
Evaluate the impact of various strains of hatchery stock on lake fisheries.	7	5	3	4	1	2	3	3
Participate in land- and water-use planning that affects lake fisheries.	2	2	2	2	4	3	-	2
Inform the public regarding resource issues.	10	7	7	7	6	6	-	9
Evaluate compliance with fish and game laws.	11	8	8	6	5	8	-	10
Determine access needs and acquire access sites through easements or purchases.	8	9	9	9	10	1	-	8



Cool and Warm Water Fish in Streams

OBJECTIVES BY 1990: To preserve or enhance the habitat in 4,400 miles of streams that support these species.

To provide 188,100 days of fishing; an increase of 20% over use in 1984.

To manage these species for scientific and aesthetic purposes, and for their inherent value.

STATUS. Cool and warm water fish in streams include stream dwelling populations of sauger, walleye, northern pike, smallmouth bass, channel catfish, sturgeon and burbot (ling). The group is most common in streams of central and eastern Montana, but limited populations of some species are present in the western regions. The fishery occurs in about 4,400 miles of stream. Additional tributaries maintain stream flow and water quality and may support fish at some time during the year.

MANAGEMENT. Habitat deterioration has influenced the species throughout their ranges. Recently enacted environmental laws protect these fish and their habitats through improved pollution control, constraints on channel and streambank alterations and greater consideration of fishery values in water allocations. Investigations of gamefish and habitat requirements provide the information needed to protect these fish. Flow reservations have been established on some of the larger streams.

These species are not heavily fished, so regulations have been liberal; except on the white sturgeon and paddlefish. Annual limits have been placed on these two species.

Populations in these streams are maintained through natural reproduction. Hatchery-reared fish have been planted occasionally to establish a species, but maintenance plants have not been used to support the recreational fishery.

Residents account for 95% of the angler use on these waters. Current use is 157,800 days and is expected to reach 188,100 days by 1990. Fishing opportunities are limited in some communities in eastern Montana, so a single water can be especially important to local residents.

Most of the waters are bordered by private land. Waters on tribal lands have been increasingly subject to restrictions in recent years. Some stream reaches also have limited physical access because of the distribution or condition of public roads.

OBJECTIVES BY 1990

<u>REGION</u>	<u>YEAR</u>	<u>ANGLER DAYS</u>
4	1984	30,600
	1990	34,700
5	1984	26,000
	1990	29,400
6	1984	33,400
	1990	37,500
7	1984	67,800
	1990	86,500
STATEWIDE	1984	157,800
	1990	188,100



PROBLEMS
 Aquatic habitat is adversely affected by a variety of land and water uses.

STRATEGIES

Monitor the status of important species.

Establish instream flow reservations.

Provide incentives to conserve or restore riparian habitat.

Promote more efficient irrigation practices.

Represent fishery interests in statewide water adjudications.

Enforce habitat protection laws and work with agencies to minimize damage.

Determine economic value of fishing and angler preferences.

Evaluate effects of water developments and negotiate to protect stream fisheries.

Measure harvest and use by anglers.

Encourage public use of cool and warm water fisheries.

Evaluate the introduction of cool and warm water species in waters that are marginal for trout.

Determine access needs and acquire sites through easements or purchases.

	Priority by Region							STATE
	1	2	3	4	5	6	7	
	-	-	-	2	1	4	3	1
	-	-	-	3	3	2	1	2
	-	-	-	6	7	3	6	4
	-	-	-	11	8	8	-	6
	-	-	-	10	9	6	-	7
	-	-	-	4	5	7	-	8
	-	-	-	8	11	11	-	9
	-	-	-	1	10	1	5	3
	-	-	-	7	4	9	2	5
	-	-	-	9	2	5	4	12
	-	-	-	12	6	10	-	11
	-	-	-	5	-	-	-	10

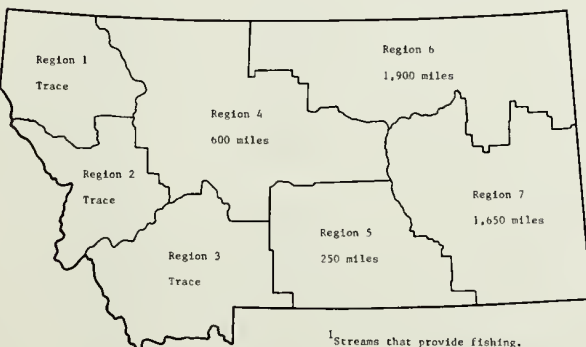
Needs of fishery resources aren't adequately considered in the plans of government agencies.

Information regarding use and harvest by anglers is lacking

Access to streams is limited by land ownership, legal constraints and distance from population centers.

FUTURE. These streams and their fish populations will continue to be an important part of the aquatic resource, especially for residents of eastern Montana. We can meet anticipated demand for fishing on this group through 1990, but continuing efforts will be required to prevent habitat deterioration.

REGIONAL DISTRIBUTION OF STREAMS¹





Cool and Warm Water Fish in Lakes

OBJECTIVES BY 1990: To preserve or enhance the habitat in 239 lakes and reservoirs that support these species.

To provide 219,800 days of fishing; an increase of 39% over use in 1984.

To manage these species for scientific and aesthetic purposes, and for their inherent value.

STATUS. Cool and warm water fish in lakes include sauger, walleye, northern pike, bass, sturgeon, burbot (ling), channel catfish and several species of nongame fish. Most of the fishery is in the eastern half of the state, but each region has a few lakes that support one or more species in this group. Approximately 240 waters, ranging from small farm ponds to large lakes and reservoirs, support this fishery.

Farm ponds are typically short-lived and often provide fishing for only a few years. Siltation rates, water quality or temperatures limit the productive period. Many of these ponds are in remote locations. In spite of these limitations, farm ponds have special importance because they often provide the only fishing opportunity for local residents.

MANAGEMENT. Management is based primarily on self-sustaining populations, but hatchery-reared fish are planted in waters that lack adequate spawning. The management program for some of these species has been limited by an inadequate supply of hatchery fish (walleyes, northern pike and bass).

Regulations have generally been liberal with year-round fishing on most waters. The harvest of white sturgeon has been restricted and daily limits on walleye, northern pike and bass have been reduced in recent years. We have encouraged increased fishing of other species.

This fishery supported 158,000 days of fishing in 1984 and use is expected to reach 219,800 days in 1990. Resident anglers account for 90 percent of the use. A large part of the nonresident use occurs in Region 7 (Miles City) because of Wyoming anglers who fish the Tongue River Reservoir and nearby ponds.

Seventy-five percent of this fishery is in lakes and reservoirs bordered by public land. The ownership pattern ensures public access to a large part of the fisheries. Most ponds and lakes on private land are available to the public with minimal restrictions. A small part of this fishery is on tribal land where special fees are charged for public recreation. The shoreline of Fort Peck Reservoir is mostly in public ownership, but much of the reservoir receives little use because of a lack of roads and the long distance required for boat travel.

OBJECTIVES BY 1990

<u>REGION</u>	<u>YEAR</u>	<u>ANGLER DAYS</u>
1	1984	11,100
	1990	13,100
2	1984	300
	1990	300
3	1984	8,300
	1990	8,900
4	1984	24,100
	1990	36,600
5	1984	24,100
	1990	44,300
6	1984	70,600
	1990	90,700
7	1984	20,400
	1990	25,900
STATEWIDE	1984	158,900
	1990	219,800



PROBLEMS
Hatchery fish needed for management are not available.

Access to lakes is limited by land ownership, legal constraints, and distance from population centers.

Aquatic habitat is adversely affected by a variety of land and water uses.

Demand for lake fishing is increasing.

Increased public involvement is needed in resource issues.

Information regarding forage fish in reservoirs is lacking.

STRATEGIES
Develop hatchery facility to provide a dependable supply of fish needed for recreational fisheries.

Develop a supply of eggs and fish from in-state sources.

Determine access needs and acquire sites through easements or purchases.

Evaluate reservoir management practices and negotiate modifications that would improve aquatic habitat.

Represent fishery interests in statewide water adjudications.

Encourage pond and reservoir management practices that benefit fish production.

Develop a computerized data base storage system.

Determine economic value of fishing and preferences of anglers.

Convert marginal trout ponds to cool/warm water fisheries.

Measure harvest and use by anglers.

Construct ponds suitable for sport fishing.

Encourage sportsmen to take an active role in landowner sportsmen issues.

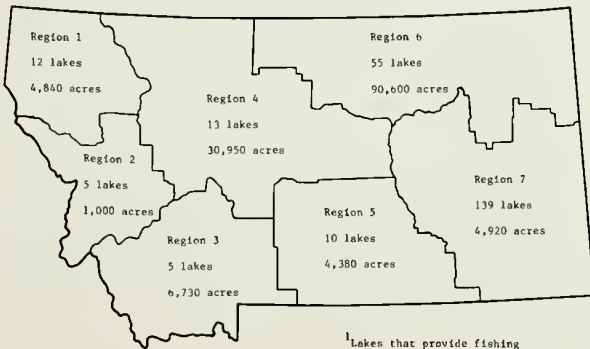
Evaluate forage fish production and improve forage base.

Priority by Region								STATE
1	2	3	4	5	6	7		
2	9	-	1	2	3	2		1
3	10	-	2	4	1	3		4
4	12	-	8	8	2	-		2
1	7	1	3	7	5	5		5
8	2	-	10	9	8	-		11
10	3	-	11	6	10	-		8
5	8	-	12	10	11	-		9
6	6	-	5	12	12	-		12
11	11	-	9	1	7	-		3
7	1	2	4	5	6	6		6
-	-	-	-	-	-	-	1	13
12	4	-	7	11	9	-		10
9	5	-	6	3	4	4		7

FUTURE. The water base that supports this fishery is expected to remain fairly stable through 1990. The Department will continue to monitor environmental conditions.

There is interest in expanding the walleye and northern pike fisheries in eastern Montana. Hatchery facilities have been acquired to increase the supply of those species and thereby provide additional fishing opportunities. The objective for this element reflects an anticipated increase in angler use by 1990.

REGIONAL DISTRIBUTION OF LAKES¹





Nongame Fish and Other Aquatic Animals

OBJECTIVES BY 1990: To preserve or enhance nongame aquatic species and their habitats.

To provide for beneficial use of aquatic nongame animals.

To maintain the commercial harvest opportunities where commercial harvest is compatible with recreational use.

STATUS. Nongame species are all fish not included in game or sport fish classifications, amphibians and aquatic invertebrates. These animals are important in aquatic food chains and many are indicators of water quality. They are the subjects of scientific and educational studies and are used to a limited extent for human consumption.

MANAGEMENT. Commercial fishing is allowed on selected waters for a few species. Most of the fish are sold in out-of-state markets for human consumption and some are sold locally for bait. Gear and site restrictions minimize effects on recreational fishing and on nongame fish.

Commercial fishermen harvest an annual average of 500,000 pounds of buffalo, carp and goldeyes. Most of the harvest currently comes from three reservoirs in central and eastern Montana. Other waters could support a commercial harvest, but current market conditions don't justify an expansion of commercial fishing.

Several species of nongame fish have been designated "species of special concern," because of their reduced populations. They are shortnose gar, sturgeon chub, sicklefin chub, trout perch, shorthead sculpin, and the spoonhead sculpin. These species receive special consideration in management decisions that could jeopardize them.

Nongame fish of little recreational value frequently become dominant in lakes. These lakes are sometimes treated with chemicals to reduce or eliminate the less desirable species so it can be replaced with more popular game fish. Precautions are taken to minimize the effects of chemical treatment on other resources.

Nongame fish are used for bait throughout the state by recreational anglers. Sculpins are an effective bait for trout and are used extensively in the western half of the state. Sculpins are sold by bait shops, but collection methods are carefully controlled. Other nongame fish, mostly minnows and suckers, are used for bait in eastern Montana. The harvest is regulated to avoid overharvest of the bait species or a

reduction in forage supply for game fish. Currently 36 dealers are licensed to harvest bait fish from designated waters in the eastern part of the state.

Two species, spottail shiner and cisco, have been planted in Fort Peck Reservoir to improve the forage base for game fish. The Utah chub was introduced through bait fishing into the headwaters of the Madison drainage. This chub has expanded its range through the Madison River and into the Missouri River.

FUTURE. The commercial harvest of nongame fish is expected to remain near the current level for several years. Market conditions will continue to limit the harvest. Distant markets and competition from marine sources will preclude any significant increase in the commercial harvest.

The number of bait dealers is expected to remain near the current level in the near future. However, an expansion of the walleye and northern pike fisheries may create additional demand for bait fish.



<u>PROBLEMS</u>	<u>STRATEGIES</u>	<u>Priority by Region</u>							<u>STATE</u>
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
Information regarding the impact of bait harvest is lacking.	Monitor the bait fish harvest to avoid overharvest.	1	1	1	1	1	1	1	1
Interest in commercial fishing is low.	Provide an opportunity for commercial use of species designated by law.	2	2	2	2	2	2	2	2
Information regarding the status and needs of native species is lacking	Monitor nongame populations and their habitats to determine actions necessary to protect native species.	3	3	3	3	3	3	3	3



WILDLIFE PROGRAM

Deer

Elk

Antelope

Black Bears

Grizzly Bears

Moose

Bighorn Sheep

Mountain Goats

Mountain Lions

Pheasants-Huns-Chukars

Prairie Grouse

Mountain Grouse

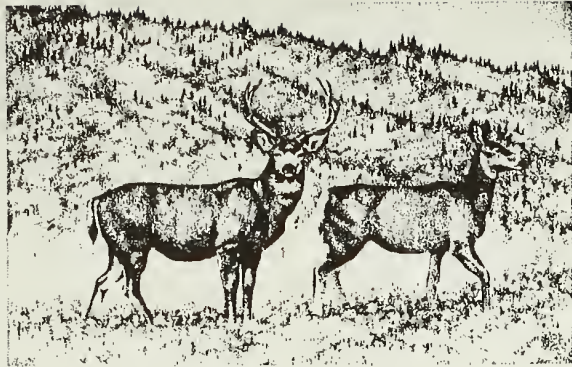
Turkeys

Waterfowl

Furbearers

Nongame

Endangered Species



WILDLIFE PROGRAM

GOAL: To protect, perpetuate, enhance, and regulate the wise use of these renewable resources for public benefit now and in the future.

At present, 502 species of mammals, birds, and reptiles categorized as Big Game, Small Game, Nongame or Endangered Species fall under the auspices of Montana's Wildlife program.

MANAGEMENT. The Department is responsible for: (1) protecting, perpetuating, and enhancing wildlife, and (2) providing the public with an equitable distribution of diverse and high-quality outdoor recreational opportunities.

Quality of the wildlife related experience is important, but like beauty, it lies "in the eyes of the beholder." The Department can best ensure "quality wildlife experiences" by providing a wide variety of wildlife-recreational opportunities and by managing the distribution of hunters and other wildlife users in time and space.

Hunting has long been a tradition in Montana. The current popularity of hunting in Montana is indicated by 1984 participation rates:

- 219,000 residents and over 29,000 nonresidents purchased 1 or more hunting licenses or permits.
- Over 575,000 hunting licenses and permits were purchased, providing three-fourths of the Department's license income.
- More than 2.4 million days were spent hunting big game and game birds.
- Archery license sales increased from 10,424 in 1978 to 19,861 in 1984.

By 1990, over 3,100,000 days of hunting are expected annually if wildlife program objectives are attained.

Viewing and photographing wildlife are also popular activities for Montanans and visitors to the state. To some people it is important just to know that wildlife is "out there." A 1980 Federal survey indicated that over 70% of Montanans participated in wildlife-related recreation, other than hunting.

FUTURE. As Montana's population grows, intensifying and expanding land uses will continue to decrease available wildlife habitat. The Department will seek increased recognition of the needs of wildlife in all public land-use decisions and support improved long-range stewardship on all lands of the state.

Increasing demands for all types of hunting are expected. We need improved management strategies to ensure rates of harvest that result in populations balanced between biological requirements and socioeconomic constraints, and that provide a diversity of high-quality hunting opportunities.

Managing wildlife occurring on private land needs increased attention. We need to minimize game damage and promote landowner-sportsmen relations to maintain reasonable public access to wildlife resources.

Interest is growing for nongame species. The Department will increase management emphasis on nongame and endangered species.

Illegal uses of wildlife gain significance as



public demands for legal wildlife use increases. Innovative law enforcement and increased public assistance will be necessary to reduce illegal uses of wildlife.

Coordination between Federal and State agencies whose actions affect wildlife will become increasingly important.

The 1984 Legislature designated bison as a game animal, so that public hunting can be used to control bison migrating into Montana from Yellowstone National Park. A permit season has been established for late 1985 and 1986. The National Park Service is being encouraged to find other ways to solve the problem.

Public support for wildlife and public understanding of wildlife management needs are vitally important. Montanans will need to join together to protect wildlife habitat and support wise uses of the resource - if our wildlife heritage is to maintain a prominent position in Montana's future. A well-informed and involved public are vital if wildlife and hunting are to maintain a place in the design for Montana's tomorrow!

The species plans that follow describe where we have been, and where we think the wildlife program should be going. The objectives are short-term, focusing on attainment by 1990. Many of the objectives are optimistic in that they call for improvement--or holding the line--at a time when stresses on wildlife resources are mounting. Future harvest objectives on game species must be considered "target" numbers due to the many factors that influence annual wildlife population levels and harvests. The strategies listed are those we think need increased emphasis.

STATEWIDE HUNTING RECREATION
(Current and Objectives By 1990)

SPECIES	HUNTERS AFIELD		HUNTING DAYS	
	1984	1990	1984	1990
BIG GAME				
Deer	159,630	160,000	1,131,028	1,152,600
Elk	86,443	101,000	569,444	801,400
Antelope	37,000	40,272	93,841	105,300
Moose	619	816	3,516	6,700
Bighorn Sheep	582	1,200	3,054	7,608
Mountain Goat	315	430	1,439	2,000
Black Bear	11,354	14,700	66,356	88,400
Big Game				
Archery	16,864	21,000	187,058	228,000
TOTAL BIG GAME			2,055,736	2,392,008
UPLAND BIRDS				
Waterfowl	17,000	30,000	151,278	288,400
TOTAL GAME BIRDS			426,918	680,600
TOTAL (BIG GAME & BIRDS)			2,482,654	3,072,608



Deer

OBJECTIVE BY 1990: To stabilize deer populations and attain annual harvests of up to 156,000 deer while providing 1.1 million days of hunting for 160,000 hunters (237,000 tags afield). Compared to 1984, this is an 8% decrease in harvest, with a similar level of hunters and deer hunting recreation.

Deer provide hunting for more than 160,000 hunters and year-round enjoyment for many other people.

STATUS. Mule deer occur over 90% of the state, at elevations ranging from below 3,000 feet to over 8,000 feet. They inhabit the prairies, pine forests, badlands, river bottoms, and breaks in eastern Montana as well as the foothills, mountains, and valleys of central and western Montana. Land ownership where they occur is 38% public and 62% private. More than 50% of the mule deer harvest comes from private land. Deer populations peaked in the 1950s and early 1960s. An extensive decline occurred from 1973 to 1975. By 1978, mule deer numbers increased markedly, peaking at high levels in 1983-84 and are now declining in many areas of the state. Densities commonly range up to 20 deer per square mile.

White-tailed deer range over more than 33% of the state. They inhabit brushy cover along drainages, which often are close to agricultural lands. They also inhabit the ponderosa pine forests of southeast Montana

and the closed canopy Douglas-fir and ponderosa pine forests west of the Continental Divide. Land ownership where whitetails occur is 32% public and 68% private. More than 75% of the whitetail harvest comes from private land. Whitetails have been increasing in distribution and abundance. Densities commonly range up to 30 deer per square mile.

MANAGEMENT. Mule deer population "ups and downs" in the past 20 years point out the difficulty of managing changing deer populations in the face of increasing demands for hunting, constraints of private land, intensifying land uses, weather variations, and other factors.

Currently, abundant deer populations require a wide variety of harvest strategies to control excessive numbers in agricultural areas. The Department holds special hunts before and after the regular season. Multiple tags are available in many hunting districts to balance the number of hunters required to control deer on private lands.

The statewide deer harvest increased to 139,500 in 1983 and exceeded 169,000 in 1984.

FUTURE. The intent of deer management will be to stabilize populations and minimize the extreme "ups and downs" of the past. Managing for population stability will be particularly important in central and eastern regions where private land prevails. Western regions where public lands predominate, will be managed for increases in deer populations.

A diversity of hunting opportunities for firearms hunters and archers will be provided. These will include high success-maximum allowable yield to lower success-quality experiences, balanced with landowner tolerance and user acceptance. Deer hunting success will continue to vary across the state. Eastern Montana deer management objectives for 1985-90 will include maintaining a higher hunter success (65%-75%), lower hunting effort per deer, and multiple tags where needed to balance the number of hunters necessary to harvest deer on private land. Western Montana regions,



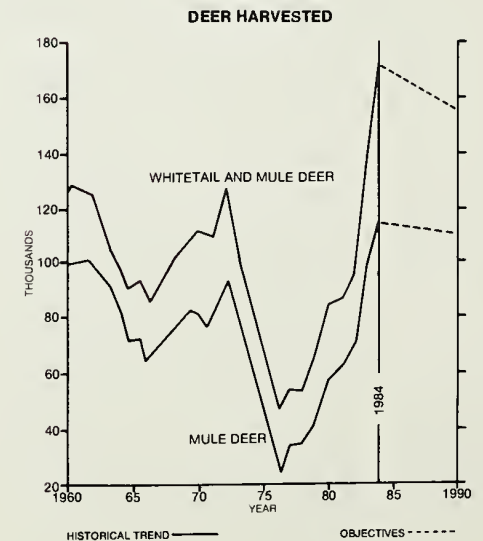
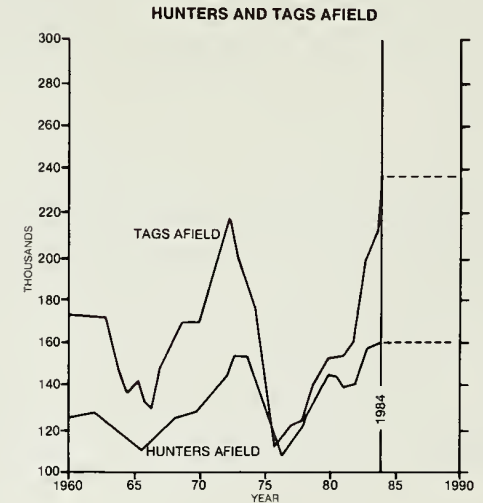
where public lands and hunters are more abundant and forest cover is more extensive, have objectives with lower hunting success (40%-45%) and longer hunting effort per deer harvested.

Hunting regulations will have to be adjusted annually as deer populations fluctuate. Matching hunting pressure in relation to deer population changes and landowner tolerance for deer and deer hunters will be important.

1984 Deer Harvests and 1990 Objectives
Mule Deer (MD) and White-tailed (WT) Deer

Region	Year	Harvest		Hunters (tags) Afield	Hunting Success	Hunting Days	Effort Days/deer	Population Trend By 1990
		MD	WT					
1	1984	2,891	7,125	18,458	54%	116,754	12	MD-Increase
	1990	2,900	6,400	23,250	40%	167,400	18	WT-Increase
2	1984	6,744	5,589	26,278	47%	167,901	14	MD-Increase
	1990	6,000	4,500	26,000	40%	170,000	16	WT-Increase
3	1984	15,421	4,542	38,744	52%	206,743	10	MD-Stabilize
	1990	14,900	2,800	38,000	46%	212,100	12	WT-Stabilize
4	1984	24,652	7,771	46,658	69%	170,496	5	MD-Stabilize
	1990	25,900	6,000	45,650	70%	159,700	5	WT-Stabilize
5	1984	14,354	4,769	27,007	71%	89,475	5	MD-Stabilize
	1990	14,000	2,400	25,000	65%	98,400	6	WT-Increase
6	1984	12,017	5,678	23,897	74%	86,893	4	MD-Stabilize
	1990	15,000	7,500	30,290	74%	105,000	5	WT-Stabilize
7	1984	36,796	21,286	65,651	88%	293,189	5	MD-Stabilize
	1990	31,000	17,000	64,000	75%	240,000	5	WT-Stabilize
STATEWIDE	1984	112,873	56,761	237,037	72%	1,131,028	7	
	1990	109,700	46,600	237,000	66%	1,152,600	7	

STATEWIDE TRENDS AND OBJECTIVES OF DEER HARVEST AND HUNTERS





PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
Improved capability is needed to properly match annual hunting regulations with changing population of deer.	Upgrade deer surveys and improve ability to determine allowable rates of harvest.	1	2	1	1	1	1	7	1
	Increase public awareness of the need for annual adjustments in deer seasons in accordance with availability of deer and landowner considerations.	-	7	8	8	8	9	6	8
Habitat is declining because of expanding and intensifying land uses.	Seek improved recognition of deer habitat needs in land-use decisions, and seek mitigation for destroyed habitat.	3	1	3	2	5	2	8	2
	Provide assistance and incentives to interested landowners to protect habitat.	6	3	5	3	6	6	1	4
	Evaluate effects of specific land uses on deer habitat.	2	8	6	5	7	5	-	6
	Increase public awareness of the social and economic benefits of deer and deer hunting.	4	9	9	9	10	8	4	9
Restricted access to private land reduces the availability of deer for hunting.	Minimize the negative effects of hunters and develop incentives for private landowners to provide access for public hunting.	7	6	-	4	4	7	3	7
Some deer herds cause significant damage to agricultural crops.	Improve procedures to respond promptly and effectively to landowners reporting damage from deer.	5	5	7	7	3	3	2	3
Excessive concentrations of hunters reduce the quality of hunting and exceed the tolerance of landowners.	Develop innovative hunting season regulations to improve distribution of hunters.	-	4	4	5	2	4	5	5
Illegal harvest of deer.	Upgrade enforcement in specific areas and seek public assistance to reduce violations.	8	10	10	10	9	10	-	10



Elk

OBJECTIVE BY 1990: To maintain an annual harvest of 17,500 elk and provide 801,400 days of hunting to 101,000 hunters. Compared to 1984, this is a 5% decrease in harvest, a 17% increase in hunters, and a 29% increase in elk hunting recreation.

The elk is the favorite big game species of many Montanans and visiting hunters, as well as wildlife viewers.

STATUS. Elk occur over 28% of the state, at elevations ranging from about 3,000 feet to over 9,000 feet. Their habitat includes the dense, moist forests of the northwest, the timbered mountain ranges of western and central Montana, as well as the more arid terrain of the Missouri River Breaks. About 80% of the elk harvest comes from public land. Public ownership of key winter ranges has enhanced the future of several major elk herds.

Elk populations have been increasing; the recent series of milder winters has been favorable to them. Elk densities commonly range up to 4 per square mile. Hunting demand for elk shows a continual increase.

MANAGEMENT. Elk harvests are strongly influenced by weather patterns during the fall hunt. During the 1970s, statewide annual harvests varied from less than 8,000

elk to nearly 17,000. A wide variety of hunting opportunities is provided. Early hunts are for archers and back country rifle hunters. Either-sex seasons in portions of western Montana achieve adequate harvests in the more inaccessible mountain terrain. Branch antlered bull seasons, short either-sex hunts and controlled permit seasons are necessary where hunting pressure needs control. Post season hunts help to prevent game damage to private land, as well as to reduce excessive numbers of elk that migrate onto Montana winter ranges from Yellowstone National Park.

Since 1976, the number of nonresident elk licenses has been limited to 17,000. From 1977 to 1984, resident elk license sales have increased from 79,539 to 96,326, an average increase of 2,400 per year. If that rate of resident license sales continues, by 1995 the number of resident elk license holders will exceed the current total of both residents and nonresidents.

FUTURE. The short-term outlook for elk and elk hunting continues to be good. However, if the average success-effort and diversity

of hunting opportunities is to be maintained, land-use conflicts must be reduced and key habitat preserved.

More restrictive regulations on bull elk harvests may be necessary where hunting pressure is high and habitat security low. The positive and negative effects of changing elk harvest strategies are being evaluated now.

The long-term future of elk depends on:

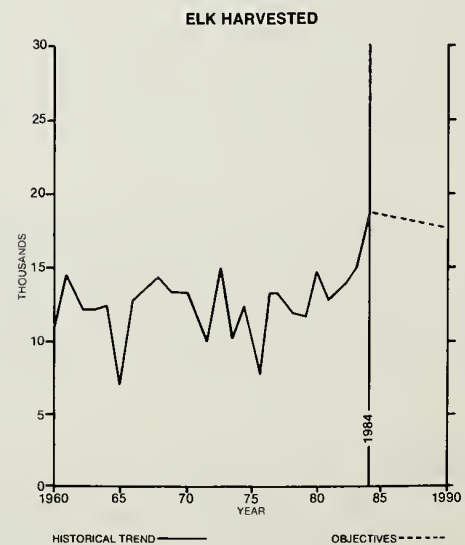
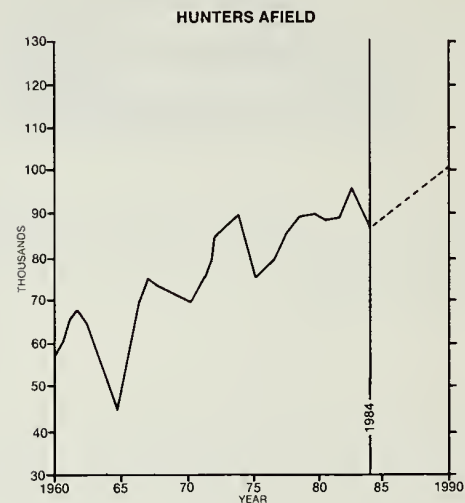
- Public control of additional key habitats.
- Protection of elk habitat as land uses intensify.
- Increased public support and funding to protect necessary lands.
- Addressing private landowner tolerances for elk and hunters.
- Optimum use of available, harvestable supplies of elk in some areas while limiting hunting in others to improve the quality of elk harvested.



1984 Elk Harvests and 1990 Objectives

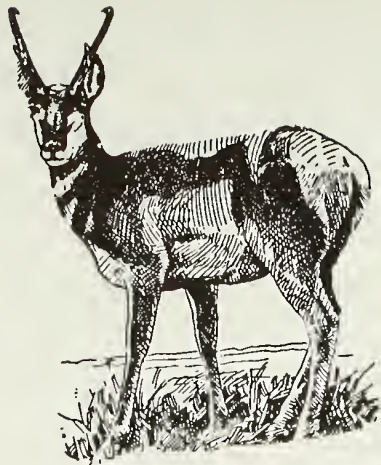
Region	Year	Harvest	Hunters (tags) Afield	Hunting Success	Hunting Days	Effort Days/Elk	Population Trend By 1990
1	1984	2,016	12,201	17%	81,878	41	Increase
	1990	2,400	21,635	11%	136,800	57	
2	1984	4,167	24,656	17%	172,078	41	Stabilize
	1990	4,000	25,000	16%	175,000	44	
3	1984	7,721	33,986	23%	211,937	27	Stabilize
	1990	7,400	37,000	15%	325,600	44	
4	1984	3,948	17,027	23%	90,188	23	Stabilize
	1990	3,100	23,800	13%	147,000	48	
5	1984	463	2,711	17%	12,779	28	Stabilize
	1990	466	4,430	11%	16,100	25	
6	1984	162	210	77%	583	4	Stabilize
	1990	200	300	65%	900	3	
7	1984	-	-	-	-	-	
	1990	-	-	-	-	-	
STATEWIDE	1984	18,478	86,443	21%	569,444	31	
	1990	17,566	101,000	17%	801,400	46	

STATEWIDE TRENDS AND OBJECTIVES
OF ELK HARVEST AND HUNTERS





PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
Elk habitat is disrupted by expanding and intensifying land uses.	Seek increased consideration of elk habitat by public land managers, particularly regarding timber management, road policies, and grazing on national forests.	2	2	3	1	2	2	-	1
Improved capability is needed to properly harvest annual available supplies of elk.	Upgrade elk surveys and improve ability to determine allowable rate of harvest.	1	4	2	3	1	4	-	2
Conflicts between elk management and private land uses are reducing ability to maintain or increase elk harvests to meet increasing demands.	Acquire key elk habitat where feasible through purchase, lease, easements, or land exchange.	4	1	1	2	-	3	-	3
There is a need to improve public awareness of elk management needs.	Provide improved information on the social and economic benefits of elk and elk hunting, and encourage public involvement in issues affecting the future of elk management.	3	8	7	4	6	1	-	5
Restricted access reduces the availability of elk for public hunting.	Seek key access with easements, trades, negotiations, or purchases.	7	5	5	6	3	8	-	7
	Minimize the negative effects of hunters and develop incentives for landowners to provide access for public hunting.	6	3	4	5	4	6	-	6
Some elk herds cause damage to agricultural crops.	Improve procedures to respond promptly and effectively to landowners reporting damage from elk.	5	6	6	7	5	5	-	4
Illegal harvest of elk.	Upgrade enforcement in specific areas and seek public assistance to reduce violations.	8	7	8	8	-	7	-	8



Antelope

OBJECTIVE BY 1990: To harvest 36,400 antelope annually and provide 105,300 days of hunting to 40,300 hunters. Compared to 1984, this is an increase of 10% in harvest, 9% in hunters, and 12% in antelope hunting recreation.

Antelope are one of Montana's most unique big game animals. Roaming the wide open prairies, they can be hunted or viewed with relative ease.

STATUS. Antelope inhabit 47% of the state, primarily east of the Continental Divide. They have a strong dependence on open, rolling sagebrush grasslands. Land ownership where antelope occur is 75% private; more than 75% of the annual antelope harvest comes from private lands. Antelope populations have been increasing. Densities commonly range up to 15 to 20 antelope per square mile.

MANACEMENT. Antelope harvests have been conducted on a permit system since 1943. The winters of 1977-78 and 1978-79 resulted in extremely high antelope mortality in eastern Montana. Entire local populations were eliminated due to blizzards and prolonged deep snow cover. The numbers of hunting permits issued were correspondingly reduced following those hard winters.

1984 Antelope Harvests and 1990 Objectives

Region	Year	Harvest	Hunters		Hunting Days	Effort Days/Antelope	Population Trend By 1990
			(tags) Afield	Hunting Success			
1	1984	-	-	-	-	-	
	1990	-	-	-	-	-	
2	1984	5	5	100%	10	2	Stabilize
	1990	5	6	83%	10	2	
3	1984	2,744	3,641	75%	7,282	3	Stabilize
	1990	2,100	2,800	75%	5,250	3	
4	1984	4,080	5,743	71%	11,486	3	Stabilize
	1990	3,100	3,900	75%	9,300	3	
5	1984	7,514	7,761	97%	15,522	2	Stabilize
	1990	6,190	7,872	79%	15,744	3	
6	1984	4,589	6,258	73%	18,774	4	Stabilize
	1990	5,000	7,700	65%	15,000	3	
7	1984	14,158	13,599	104%	40,797	3	Stabilize
	1990	20,000	18,000	111%	60,000	3	
STATEWIDE	1984	33,090	37,007	89%	93,841	3	
	1990	36,395	40,300	75%	105,300	3	



Populations recovered rapidly and during 1981-84 antelope were depredeating crops in many areas. Special multiple permits were issued to reduce antelope numbers and to minimize the number of individual hunters necessary to harvest antelope depredeating private lands.

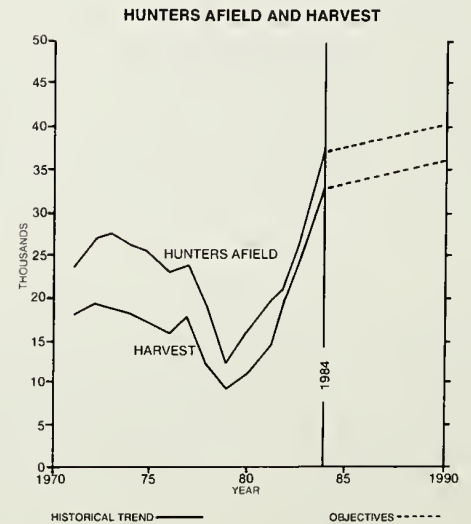
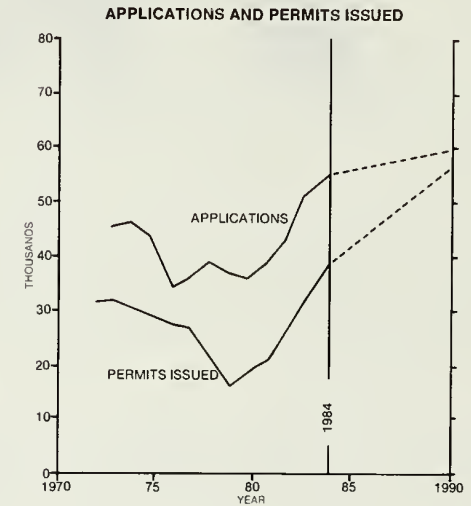
FUTURE. Increased use of antelope will depend greatly on improving access and hunter distribution on private lands, particularly in eastern regions. Improved procedures to protect landowners from negative impacts of antelope and improved hunter/landowner relations are needed.

Increased emphasis is needed to determine allowable rates of harvest by major

population units and to match harvest regulations with annual supplies of antelope. Increased public awareness of the reasons for issuing multiple tags per hunter and for "doe-fawn" permits is necessary. Multiple tags and special permits are issued to minimize the number of individual hunters needed to stabilize increasing antelope populations on private lands.

The long-term outlook for antelope populations will depend on range management practices on public and private land. Changes in agriculture also could affect future antelope populations. For example, concern is shared with other agencies and ranchers and farmers regarding "sodbusting" of grasslands and marginal soils.

STATEWIDE TRENDS AND OBJECTIVES OF ANTELOPE HARVEST AND HUNTERS



Priority by Region

PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
The antelope habitat base is declining because of expanding and intensifying land uses.	Seek improved recognition of antelope needs on public lands and provide assistance and incentives to interested private landowners to protect habitat.	-	3	1	1	4	1	1	1
Improved capability is needed to properly harvest fluctuating populations of antelope.	Upgrade antelope surveys and ability to determine allowable rates of harvest.	-	4	4	2	2	2	3	2
Restricted access to private land reduces the availability of antelope for public hunting.	Minimize the negative effects of hunters and develop incentives for private landowners to provide access for public hunting.	-	1	2	3	1	4	2	4
Some antelope herds cause damage to agricultural crops.	Improve procedures to respond promptly and effectively to landowners where damage from antelope is evident.	-	2	3	4	3	3	4	3



Black Bears

OBJECTIVES BY 1990: To harvest 1,650 black bears annually, and provide 88,400 days of hunting to 14,700 hunters afield during spring and fall seasons. Compared to 1984, this is an increase of 17% in harvest, 30% in hunters, and 33% in hunting recreation.

To minimize the negative effects of black bears to people and property.

Bears are an important part of Montana's wildlife heritage. The black bear is exciting to watch and is becoming increasingly important to big game hunters.

STATUS. Black bears are widely distributed throughout the mountains and foothill areas. The species inhabits about 25% of the state. The most productive black bear habitat is found in the northwestern corner of the state. The majority of their range is public land, but some important habitat occurs on private lands. The black bear has rapidly become a valued big game animal. In terms of hunting recreation days in 1984, the black bear was exceeded only by deer, elk, and antelope.

MANAGEMENT. Spring through fall hunting of black bear has been allowed in areas of Montana since 1959. Females with cubs of the year are protected. The statewide black bear harvest has varied between 1,100 and 2,100 annually since that time. The average statewide black bear harvest for the 1975-79

1984 Black Bear Harvests and 1990 Objectives

Region	Year	Harvest	Hunters (tags) Afield	Hunting Success	Hunting Days	Effort Days/Black Bear
1	1984	627	4,010	16%	23,250	37
	1990	750	7,588	10%	46,000	61
2	1984	353	3,111	11%	19,425	55
	1990	400	3,500	11%	23,000	58
3	1984	186	2,413	8%	14,428	77
	1990	282	2,073	14%	11,500	41
4	1984	169	1,467	12%	6,275	37
	1990	100	700	14%	4,400	44
5	1984	36	648	6%	2,977	83
	1990	71	900	8%	3,500	50
6	1984	-	-	-	-	-
	1990	-	-	-	-	-
7	1984	-	-	-	-	-
	1990	-	-	-	-	-
STATEWIDE	1984	1,373	11,354	12%	66,356	48
	1990	1,653	14,761	11%	88,400	55



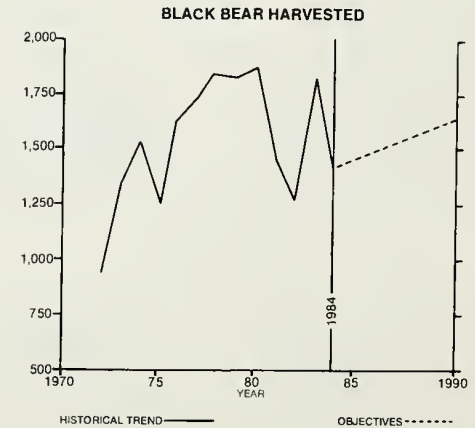
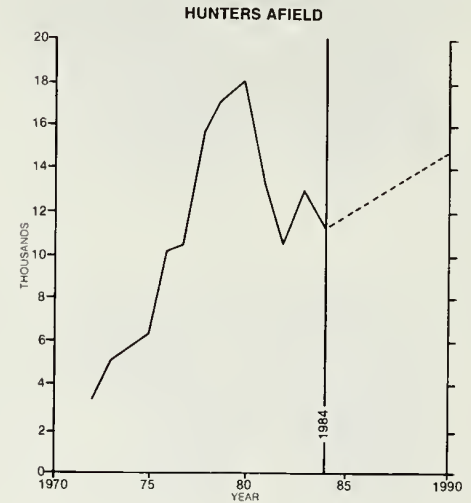
period was 1,658; the average harvest for 1980-84 was 1,558. Overall black bear management is being upgraded. Currently, more conservative hunting seasons are being set.

Some black bears cause problems. The Department responded to 130 complaints about black bears in 1983. About 50% of the offending bears were relocated and a dozen dispatched because no other options were available.

FUTURE. Continued improvement of overall black bear management is needed. This includes better knowledge of black bear population status and trends, productivity, and allowable rates of harvest. Managing for a sustainable level of annual sport hunting harvest will provide high quality public hunting opportunities while minimizing the negative effects of black bears. Special efforts to educate hunters and others afield to correctly distinguish black bears from grizzlies are needed.

STATEWIDE TRENDS AND OBJECTIVES OF BLACK BEAR HARVEST AND HUNTERS

PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
Intensifying land uses are reducing the quality and quantity of black bear habitat.	Increase coordination with land managers and developers and emphasize the value and habitat needs of bears.	2	3	2	3	3	-	-	1
Increasing hunting pressure may overharvest bears, since the status and trend of black bear populations is not well known.	Establish population surveys and methods to determine allowable rates of harvest.	1	1	1	1	1	-	-	2
Conflicts between black bears, people, and property continue to occur.	Develop a sustainable level of high-quality sport hunting that minimizes the need for direct control of black bears.	3	2	3	2	5	-	-	3
	Improve procedures for handling problem bears and increase public awareness of necessary precautions to avoid conflicts between black bears and people.	4	4	4	4	2	-	-	4
Illegal harvest of bears.	Upgrade enforcement of specific areas, seek stricter laws, and seek public assistance, including emphasis on improving hunters' abilities to distinguish black bears from grizzlies.	5	5	5	5	4	-	-	5





Grizzly Bears

OBJECTIVES BY 1990: To work towards establishing population levels that provide for recovery and the removal of grizzly bears from the endangered species list in all currently occupied habitat.

To sustain bear populations within safety tolerances for human health and private property.

The grizzly bear is designated as Montana's state animal. With the exception of Alaska, Montana has the only hunted populations of this unique, majestic, and controversial animal. The grizzly is a prized big game trophy to many, provides a thrill to all that view them, and presents a challenge, and occasionally a threat, to those who enter its domain.

STATUS. Grizzlies live in some of the more rugged and isolated mountainous terrain in five of Montana's seven regions. Major populations exist in northwestern and southcentral Montana. Although land ownership of grizzly habitat is predominately public, private lands contain important spring and fall habitat.

The grizzly bear was classified as "threatened" in the lower 48 states in 1975 under the federal Endangered Species Act of 1973. All or part of four of the six grizzly ecosystems identified in the Grizzly Bear Recovery Plan of 1982 are in Montana.

MANAGEMENT. In three of the four grizzly ecosystems, total protection is afforded the grizzly. The exception is when bears are judged to be a threat to humans. In the Northern Continental Divide Ecosystem, grizzly bears are hunted on a strict quota system. Strict monitoring of the hunt results in a closure when annual man-caused mortality reaches 21. Man-caused mortalities have averaged 18 since 1975. In recent years, even more stringent sub-quotas on female bears have been established. The limited grizzly hunt in one of the four identified ecosystems is part of a program to ensure survival of the species. The effects of this alternative to total protection are under constant evaluation. The impacts of hunting on grizzly populations, their reproductive performance, their distribution, and their interaction with humans are part of the evaluation.

FUTURE. Maintaining grizzly population levels will require special efforts to

enhance and protect currently occupied habitat. Programs are necessary to maintain important habitat on both public and private lands.

Continued efforts are needed to educate hunters and others afield to correctly distinguish grizzlies from black bears and to take precautions to prevent bear-human conflicts. Upgraded efforts are needed to minimize grizzly conflicts with landowners and recreationists in all existing or potential grizzly habitat.

The Department recently completed a Programmatic Environmental Impact Statement (EIS) on the grizzly, which included public review. Copies of the Grizzly EIS are available from the Department.



PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
The grizzly is currently listed as a threatened species in Montana under the Endangered Species Act.	Strive to attain population levels that will provide for recovery and delisting of the bear through habitat preservation, acquisition, and other standard wildlife management techniques, including hunting where appropriate.	1	1	1	1	1	-	-	1
Conflicts between grizzlies, people, and property continue to result in grizzly bear mortalities.	Reduce bear-people conflicts through educational efforts. Improve methods to handle problem bears. Monitor the level of bear-people conflicts in hunted and unhunted grizzly populations.	5	2	2	4	5	-	-	2
Intensifying land uses are reducing the quality and quantity of grizzly habitat.	Provide technical assistance to land managers to protect and enhance occupied grizzly habitat and to acquire important habitat.	2	3	4	2	2	-	-	3
	Support studies identifying grizzly distribution and habitat requirements.	3	4	5	3	3	-	-	4
	Support private programs designed to compensate for grizzly damage.	-	-	-	-	-	-	-	6
Illegal harvests of grizzlies.	Upgrade enforcement in specific areas, and seek increased public assistance and awareness, including emphasis on improving hunters' abilities to distinguish grizzlies from black bears.	4	5	3	5	4	-	-	5

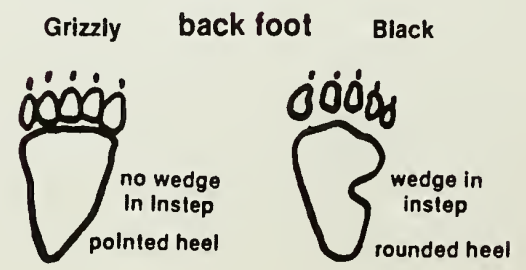
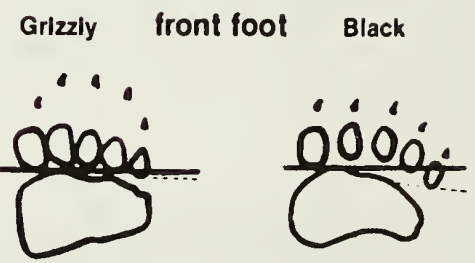


Ruff of long hair in spring and fall

GRIZZLY BEAR



BLACK BEAR





Moose

OBJECTIVE BY 1990: To harvest 600 moose annually and provide 6,800 days of hunting to 816 hunters. Compared to 1984, this is an increase of 8% in harvest, 32% in hunters and 92% in moose hunting recreation.

The moose is the largest big game animal native to Montana. Montana's moose is the medium-sized Shiras subspecies, with paler coloration than other North American moose.

STATUS. Moose occur in 18% of the state; primarily in spruce fir, Douglas fir, and deciduous forest types of northwestern and southwestern Montana. They occur east as far as Red Lodge and the Smith River area. Land ownership where moose occur is 75% public land, but private lands also provide important habitat.

MANAGEMENT. Moose hunting has been regulated by a permit system since 1945. Statewide annual harvests averaged 420 for the 1975-79 period and 465 for 1980-84, reaching 554 in 1984. Demand for moose hunting has been increasing; applications for permits in 1983 were 21,051, 27% more than in 1977. Applications decreased to 16,109 in 1984 after a license fee increase. In 1985, 18,562 applications to hunt moose were

1984 Moose Harvests and 1990 Objectives

Region	Year	Harvest	Hunters (tags) Afield	Hunting Success	Hunting Days	Effort Days/Moose
1	1984	139	153	91%	1,071	8
	1990	145	157	92%	914	6
2	1984	57	63	90%	315	6
	1990	65	76	85%	650	10
3	1984	341	375	91%	1,875	7
	1990	355	546	65%	4,915	9
4	1984	4	5	80%	25	6
	1990	6	6	100%	30	5
5	1984	13	23	57%	230	18
	1990	25	31	81%	158	10
6	1984	-	-	-	-	-
	1990	-	-	-	-	-
7	1984	-	-	-	-	-
	1990	-	-	-	-	-
STATEWIDE	1984	554	619	89%	3,516	6
	1990	596	816	73%	6,767	11



received. Four percent of those who applied were successful in drawing moose permits in 1984.

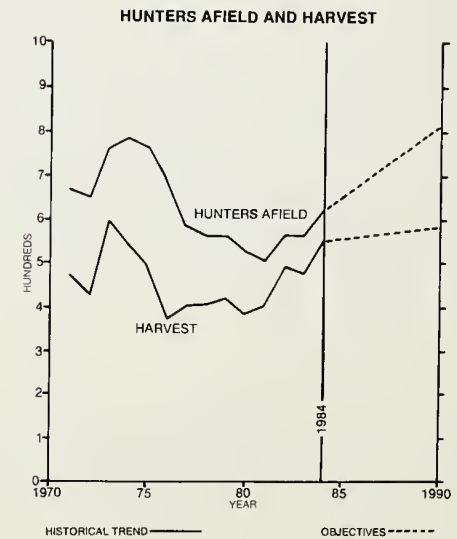
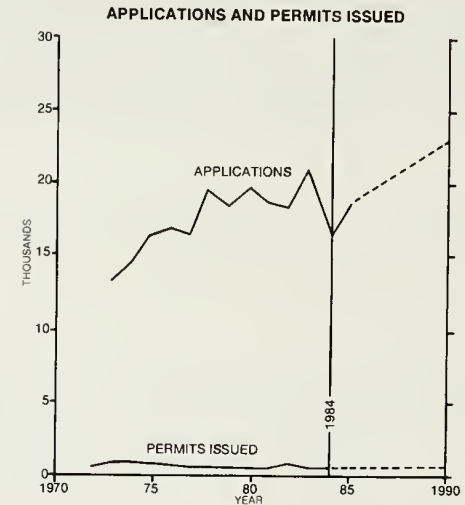
is needed. Illegal kills must be reduced. There is a large demand for moose hunting permits; only 4 percent of those who applied were successful in drawing moose permits during 1984.

FUTURE. Improved population information to better determine allowable rates of harvest

Future moose habitat will depend greatly on forest land management.

PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
Moose population information is inadequate to properly determine the best harvest rates for moose.	Upgrade population surveys as needed to determine allowable rates of harvest. Improve harvest surveys, including mandatory check-ins of harvested moose.	1	1	1	1	1	-	-	1
Intensifying forest land uses are reducing the quality and quantity of moose habitat.	Improve coordination with public land managers to adequately recognize moose habitat needs in land use activities, particularly timber management and forest road planning.	2	2	2	2	2	-	-	2
Illegal moose harvests are reducing opportunities for the law-abiding public to hunt moose.	Reduce illegal harvest through increased enforcement in specific areas and improved public assistance in reporting violators.	3	3	4	3	5	-	-	3
Restricted access to public lands reduces opportunities to hunt moose in some areas.	Assist the U.S. Forest Service in working with landowners to improve public access to public lands.	4	-	5	5	3	-	-	5
Some moose occasionally cause damage to private property.	Improve procedures to respond promptly and effectively to landowners reporting damage from moose.	6	-	6	6	6	-	-	6

STATEWIDE TRENDS AND OBJECTIVES OF MOOSE HARVEST AND HUNTERS





Bighorn Sheep

OBJECTIVE BY 1990: To harvest 369 sheep annually and provide 7,600 hunting days to 1,200 hunters. Compared to 1984, this is an increase of 31% in harvest, 100% in hunters and 150% in sheep hunting recreation.

Bighorns are favorites of wildlife photographers, viewers, and hunters.

STATUS. Bighorn sheep inhabit 3% of the state and are present in all 7 of the Department's administrative regions. Eleven herds are native; others were established through transplants. Sheep inhabit mountainous areas, with escape cover comprised of rocky ledges and walls interspersed with open slopes. Wintering areas are at lower elevations with low snow depths and rugged terrain for escape habitat. Small groups of bighorns also exist in the rugged river breaks and badlands of eastern Montana. Land ownership where wild sheep occur is over 95% public. Bighorn sheep populations appear to be stable or increasing, though disease has recently impacted some herds.

MANAGEMENT. Bighorn sheep hunting has been regulated by a permit system since 1959. Statewide harvests averaged 120 sheep during 1975-79 and 245 during 1980-84. In 1983

1984 Bighorn Sheep Harvests and 1990 Objectives

<u>Region</u>	<u>Year</u>	<u>Harvest</u>	Hunters (tags) <u>Afield</u>	Hunting <u>Success</u>	Hunting <u>Days</u>	Effort <u>Days/Bighorn Sheep</u>
1	1984	93	113	82%	565	6
	1990	109	121	90%	537	5
2	1984	72	75	96%	450	6
	1990	60	65	95%	360	6
3	1984	27	189	14%	945	35
	1990	41	535	5%	3,600	136
4	1984	77	90	86%	360	5
	1990	135	150	90%	675	5
5	1984	8	120	7%	720	90
	1990	16	320	5%	2,400	150
6	1984	2	2	100%	8	4
	1990	5	5	100%	30	6
7	1984	3	3	-	6	3
	1990	3	3	-	6	3
STATEWIDE	1984	218	592	48%	3,054	11
	1990	353	1,200	31%	7,608	21



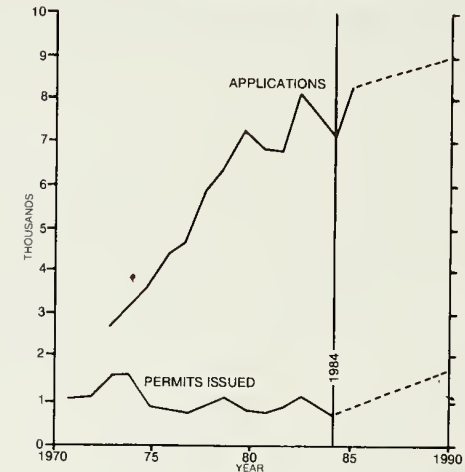
STATEWIDE TRENDS AND OBJECTIVES OF SHEEP HARVEST AND HUNTERS

there were 8,170 applications for bighorn sheep hunting permits, an increase of 77% since 1977. Applications decreased to 7,147 in 1984 after a license increase, but increased to 8,341 in 1985. Ten percent of those who applied were successful in drawing sheep permits in 1984.

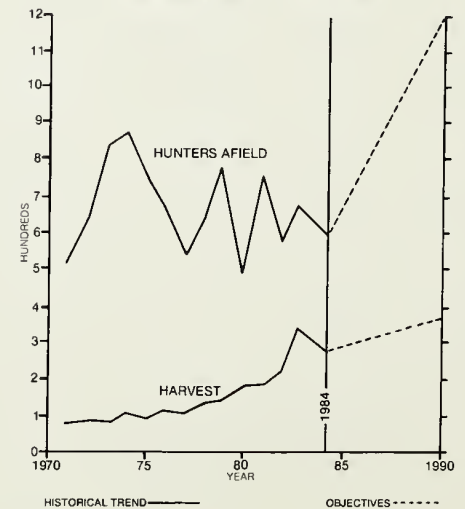
An unlimited number of permits is allowed in a few hunting districts where rugged terrain and difficult access severely limit hunters. These areas provide maximum hunting opportunity and high quality recreation at very low hunting success (1 to 5%). Better use of certain herds has allowed an increase recently in the numbers of permits available.

FUTURE. The long-term future of bighorn sheep populations will depend on the nature and intensity of competing land uses. Control of population levels, through prudent harvest of both sexes, is necessary to avoid overcrowding, disease, and competition with livestock and other big game species. Improved knowledge of sheep population dynamics, increased allowable rates of harvest, and better control of diseases and illegal hunting would contribute to better opportunities for the public to hunt, view, and photograph wild sheep. Increasing demands for sheep hunting are expected. This means continued restrictive permit systems and waiting periods for prospective hunters.

APPLICATIONS AND PERMITS ISSUED



HUNTERS AFIELD AND HARVEST

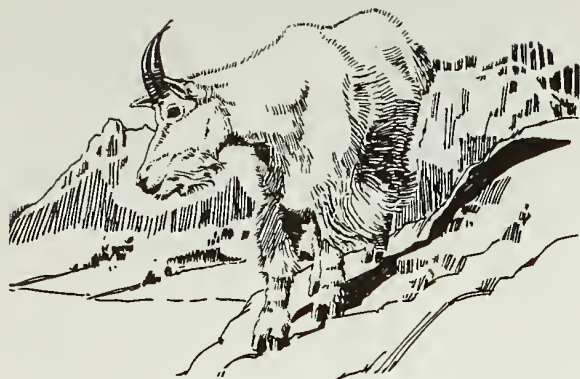


HISTORICAL TREND ———

OBJECTIVES - - - - -



PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
Intensifying land uses are decreasing the quality and quantity of bighorn habitat.	Seek adequate recognition of bighorn needs in land-use decisions. Seek mitigation for habitat destroyed by publicly funded projects.	1	2	2	1	2	1	-	1
	Protect and preserve key bighorn habitat by conservation easements, leases, land exchanges, or purchases.	2	1	3	2	-	4	-	3
	Control the numbers of other big game animals on bighorn winter range.	7	6	4	4	4	-	-	4
	Transplant bighorns into suitable, unoccupied habitat.	6	4	7	5	3	3	-	5
Bighorn sheep population information is inadequate to properly utilize harvestable supplies of sheep, including ewes.	Upgrade population trend surveys and determine allowable rates of harvest of legal rams and ewes.	3	3	1	3	1	2	-	2
Restricted access to public lands reduces opportunities to hunt sheep in some areas.	Assist U.S. Forest Service in working with landowners to improve access to public lands. Improve access where needed through negotiation, purchase, or easement.	4	-	5	5	3	-	-	7
Illegal harvest of sheep reduces hunting opportunities for the law-abiding public.	Upgrade law enforcement in specific areas. Seek improved public awareness and assistance in reducing violations.	4	5	6	6	5	5	-	6



Mountain Goats

OBJECTIVE BY 1990: To harvest 257 goats annually and provide 2,000 hunting days to 430 hunters. Compared to 1984, this is an increase of 20% in harvest, 37% in hunters, and 39% in goat hunting recreation.

Mountain goats have long been recognized as a valuable part of the big game fauna of Montana. They are highly valued for sport hunting and for the enjoyment they provide to wildlife watchers and visitors to the high country.

STATUS. Mountain goats are native to the major mountain ranges of western Montana and have been successfully introduced to isolated mountain ranges in central Montana. Goats inhabit rugged terrain at elevations between 5,000 and 11,000 feet.

Wild goats occur on only about 4% of the state, but are present in Regions 1, 2, 3, 4, and 5. Goat habitat is 94% public land. Goat populations have been decreasing in some units, while remaining stable in others.

MANAGEMENT. Mountain goat hunting has been regulated by a permit system since 1953. Statewide harvests averaged 248 a year during 1975-79, declined to 170 by 1982, and increased to 189 in 1983 and 215 in 1984.

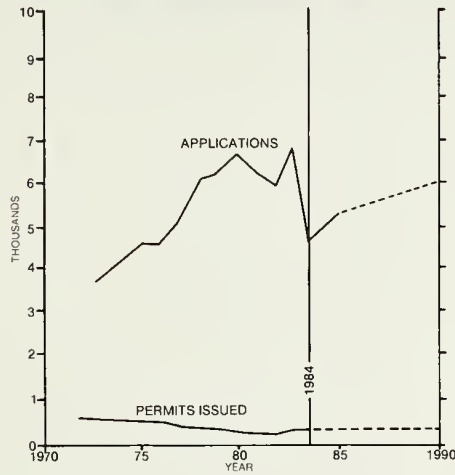
1984 Goat Harvests and 1990 Objectives

<u>Region</u>	<u>Year</u>	<u>Harvest</u>	Hunters (tags) <u>Afield</u>	<u>Hunting Success</u>	<u>Hunting Days</u>	<u>Effort Days/Goat</u>
1	1984	38	66	58%	330	9
	1990	49	82	60%	476	10
2	1984	70	113	62%	565	8
	1990	70	138	50%	560	8
3	1984	71	90	79%	360	5
	1990	83	138	60%	664	8
4	1984	19	20	95%	80	4
	1990	25	33	75%	198	8
5	1984	17	26	65%	104	6
	1990	30	40	75%	150	5
6	1984	-	-	-	-	-
	1990	-	-	-	-	-
7	1984	-	-	-	-	-
	1990	-	-	-	-	-
STATEWIDE	1984	215	315	68%	1,479	7
	1990	257	431	60%	2,048	8

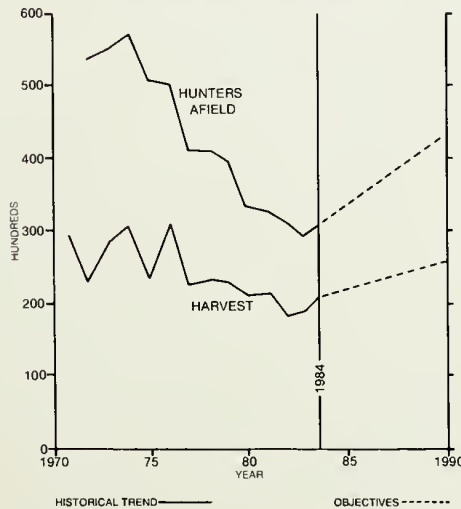


STATEWIDE TRENDS AND OBJECTIVES
OF MOUNTAIN GOAT HARVEST AND HUNTERS

APPLICATIONS AND PERMITS ISSUED



HUNTERS AFIELD AND HARVEST



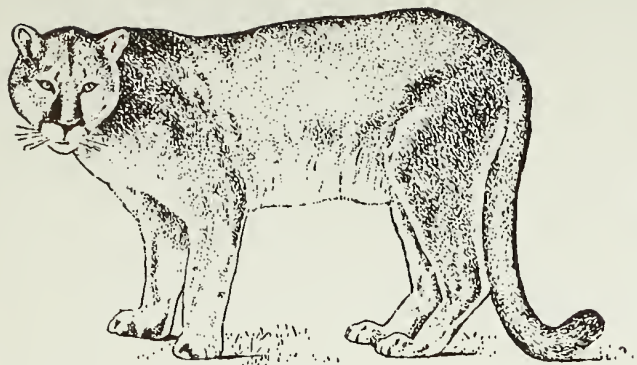
Goat hunting permits have been reduced in some hunting districts and will remain at these levels until population status and trends are better understood.

Applications for goat permits in 1983 totalled 6,856, an increase of 36% since 1977. Applications decreased to 4,685 in 1984, following a license fee increase; applications increased to 5,227 in 1985. Seven percent of all applicants were successful in drawing goat permits during 1984.

FUTURE. Increased monitoring of mountain goat population status, trends, and distribution, to better determine future allowable harvests in the face of conflicting land uses, is needed.

Goats will be managed more conservatively than in the past to increase their numbers. Managing goats to meet the 1990 objective will require improved information on populations and habitat status.

PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
Population status and trends are not known well enough to ensure proper utilization of many goat herds.	Increase aerial surveys and improve information to develop appropriate harvest levels for specific herds.	1	1	1	1	1	-	-	1
Expanding land uses are reducing the security of mountain goat habitat.	Seek adequate recognition of goat habitat needs in land-use decisions that affect areas inhabited by goats.	2	3	2	2	3	-	-	2
Hunter concentrations are excessive in some hunting units.	Adjust hunting district boundaries and distribute hunters to specific areas to attain a more even distribution of harvest.	3	4	3	3	4	-	-	3
Illegal harvests and poor hunting techniques reduce public hunting opportunities.	Seek assistance of hunters and outfitters in reducing wounding and poaching losses, in avoiding the harvest of females with young, and in retrieving dead and wounded goats.	4	2	4	4	2	-	-	4



Mountain Lions

OBJECTIVE BY 1990: Maintain lion populations in presently occupied habitat while allowing expansion into unoccupied habitat, to the degree that they do not conflict with livestock. To provide an annual harvest of 125 lions.

The mountain lion, or cougar, is the largest member of the cat family native to Montana.

STATUS. Mountain lions occur in all seven of the Department's administrative regions, but primarily inhabit the rugged mountainous areas of western Montana. Once bountied in Montana because of its livestock preying habits, the lion was classified as a trophy big game animal in 1971.

Indications are that lion populations are stable and may be expanding in some areas. Deer are their primary food source. Lions also prey on smaller mammals and birds, and occasionally kill elk and livestock.

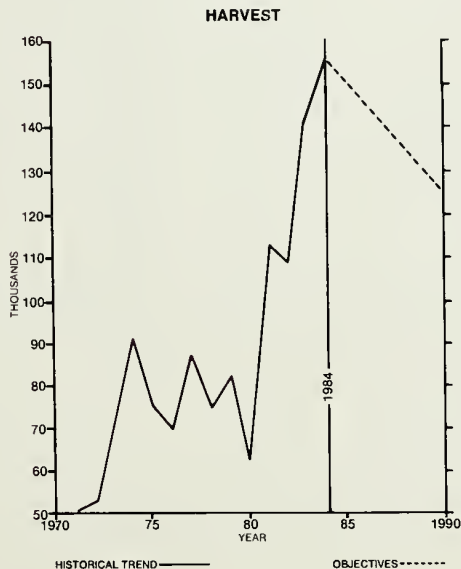
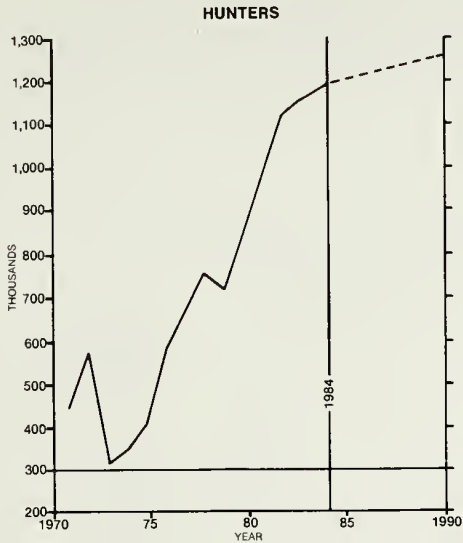
MANAGEMENT. The legislated status of mountain lions as big game animals permits the Department to license lion hunters and regulate lion harvests. More than 8,000 licenses have been issued since 1971; license sales have more than tripled since 1973 (314) and reached a maximum of 1,153 in 1983. Eighty-seven percent of the licenses were issued to Montanans.

Mountain Lion Harvest Trend and 1990 Objectives

Year	Region					Statewide
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
1971	22	18	4	5	2	51
1972	22	20	4	6	2	54
1973	25	38	1	6	2	72
1974	46	34	5	6	0	91
1975	44	21	2	6	3	76
1976	37	20	8	1	4	70
1977	41	19	9	11	8	88
1978	29	24	13	6	3	75
1979	29	23	14	5	11	82
1980	15	20	7	12	8	62
1981	44	31	16	14	8	113
1982	44	31	17	11	6	109
1983	64	36	19	11	11	141
1984	42	49	26	26	13	156
Totals	504	384	145	126	81	1,240
Percent						
Statewide	(41%)	(31%)	(10%)	(9%)	(6%)	
Averages						
(14 years)	36	27	10	9	6	88
1990	54	39	14	11	7	125



STATEWIDE TRENDS AND OBJECTIVES OF MOUNTAIN LION HARVEST AND HUNTERS



Over 1,100 mountain lions have been legally harvested since 1971, with an average harvest of 88 per year. Maximum lion harvests were recorded in 1983 (141) and 1984 (156). Hunting success, based on numbers of licenses issued, has ranged from 8% to 26% and averaged 12%, indicating the relative difficulty of harvesting a lion. Regions 1 and 2 have almost three-fourths of the lion harvest (41% and 31%); the remainder are taken in Regions 3 (11%), 4 (9%), and 5 (6%). Lion harvests have increased noticeably east of the Continental Divide since 1977. Factors influencing annual harvests are lion abundance, good tracking (snow) conditions, increased interest by hunters and outfitters, and hunting techniques (hounds).

Lion abundance appears related to increased numbers of deer.

A "chase-only season" during which lions can be pursued but not killed, has been allowed in some areas since 1979. These seasons occur during the last 10 weeks of each lion season and are quite popular with houndsmen.

Conflicts with livestock are usually handled by removing the problem lion.

FUTURE. Maintenance of lion populations in view of the increasing demand for lion hunting depends upon gathering necessary information on local and regional populations, prey populations, habitats, and hunter accessibility. Such information includes the composition, location, rates and trends of the harvest, as well as mapping of lion presence in specific areas. It might be possible to expand distribution of lions in Montana without adversely impacting livestock interests. The importance of protecting the habitat of this unique big game species needs to be emphasized to federal land management agencies.



PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
Population information to ensure proper harvest of lions is inadequate.	Develop improved methods to determine lion population trends and allowable rates of harvest.	1	1	1	1	1	-	-	1
Intensifying land uses are reducing the security of mountain lion habitat.	Improve coordination with land managers to adequately consider lion habitat needs in land-use planning.	2	2	2	3	3	-	-	2
	Encourage houndsmen, hunters, outfitters, and others to take part in resource issues involving lions.	3	3	3	2	5	-	-	3
Some mountain lions kill livestock in certain areas.	Reduce livestock loss through prompt action on problem lions and coordination with public land managers and landowners.	5	4	5	4	4	-	-	4
Illegal harvest of lions.	Upgrade enforcement in specific areas and seek increased public assistance in reducing illegal kills.	4	5	4	5	2	-	-	5



Pheasants-Huns-Chukars

OBJECTIVE BY 1990: To harvest 112,400 pheasants, 78,600 huns, and 1,200 chukars providing 153,000 hunting days to 55,900 bird hunters. Compared to 1984, this would be an increased harvest of 7% more pheasants, 84% more huns, and 131% more chukars providing 30% more hunting days to 43% more bird hunters.

Three introduced game birds--ring-necked pheasants, Hungarian partridge, and chukar partridge--play an important role in providing Montana's bird hunters and bird watchers with recreation and enjoyment.

STATUS. These three upland game bird species were originally imported from other continents. The ring-necked pheasant was introduced from China via Oregon in 1895. It did not, however, become established until the 1920s and 1930s when grain crops became more widespread. By 1940, pheasants were Montana's most popular game bird, a rank they still hold with hunters, landowners, and other wildlife enthusiasts. Most pheasant habitat is on private land. Habitat includes grain crops, grasses and weeds for food, and a combination of grasses, weeds, brush, and trees for cover.

Hungarian, or gray, partridge were brought from central Europe in the early 1920s. A few populations may have been established along the Hi-Line by 1914 as a result of releases in Alberta, Canada in 1908-10. Like pheasants, distribution and abundance of

1984 Pheasant-Hun-Chukar Harvests and 1990 Objectives

Region	Year	Harvest			Bird Hunters	Hunting Days			Aver. Birds/Hunter		
		Pheas.	Hun	Chukar		Pheas.	Hun	Chukar	Pheas.	Hun	Chukar
1	1984	6,740	416	-	5,504	6,674	784	-	1.2	.1	-
	1990	7,500	1,500	-	6,000	10,000	1,000	-	1.3	.3	-
2	1984	1,634	154	-	3,486	1,546	132	-	.5	-	-
	1990	2,500	500	-	5,500	4,000	800	-	.5	-	-
3	1984	5,032	5,456	-	3,488	5,692	3,058	-	1.4	1.6	-
	1990	7,000	6,700	-	6,000	7,000	6,500	-	.9	1.1	-
4	1984	36,104	12,610	-	10,114	26,732	10,170	-	3.6	1.3	-
	1990	35,400	46,200	-	15,400	24,800	23,100	-	2.3	3.0	-
5	1984	19,152	5,752	168	5,894	18,166	4,484	432	3.3	1.0	-
	1990	10,000	7,300	1,200	6,000	9,100	4,900	1,000	1.7	1.2	-
6	1984	20,008	8,034	-	5,550	16,316	6,532	-	3.6	1.5	-
	1990	20,000	10,000	-	8,000	15,000	10,000	-	2.5	1.3	-
7	1984	16,210	2,346	-	4,992	14,058	3,534	-	3.3	.5	-
	1990	30,000	6,400	-	15,000	30,000	6,400	-	3.3	.7	-
STATEWIDE	1984	104,880	34,768	168	39,028	89,184	28,694	432	2.7	.9	-
	1990	112,400	78,600	1,200	55,900	99,900	52,700	1,000	.0	1.4	-



"Huns" have persisted mostly east of the Continental Divide. They now have the widest distribution of any upland game bird in the state. Huns are widely distributed over both public and private lands.

Chukar partridge were introduced from central Asia throughout Montana during 1933-1958. The bird's inability to survive harsh winter temperatures and deep snow limited its establishment to south-central Montana, particularly Carbon County.

MANAGEMENT. Pheasant numbers began a 15-year decline in the early 1960s, primarily because of intensified agricultural practices. However, after three severe population crashes (mid-1940s, mid-1960s, and mid-1970s) pheasant numbers seem to have stabilized at fair levels since about 1977. Annual pheasant harvests ranged from 48,400 to 106,485 during 1971-80, with a 10-year average of 84,000. Harvests ranged from 98,941 to 163,499 during 1981-84, averaging 116,744 per year.

Annual Hungarian partridge harvests ranged from 32,600 to 103,900 during 1971-80, with a 10-year average of 62,000. Harvests ranged from 24,966 to 39,799 during 1981-84, averaging 32,368 per year.

Annual chukar harvests ranged from 888 to 2,518 during 1971-80, with a 10-year average of 1,800. Harvests varied from 168 to 1,421 during 1981-84, averaging 913 per year.

Pesticide contamination discovered in 1981 resulted in warnings to upland bird hunters and resulted in a decrease in bird hunters and harvests. Phasing out the use of persistent insecticides is reducing this problem.

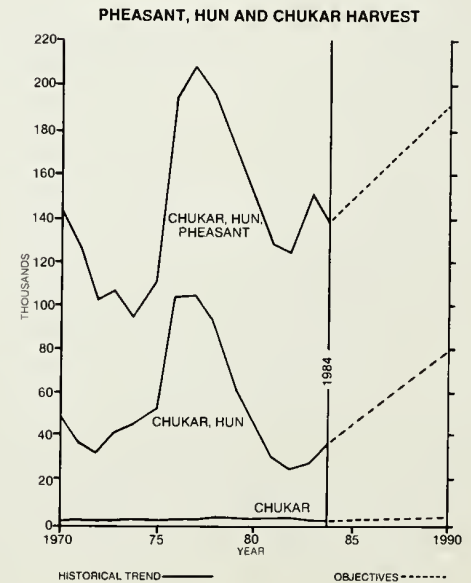
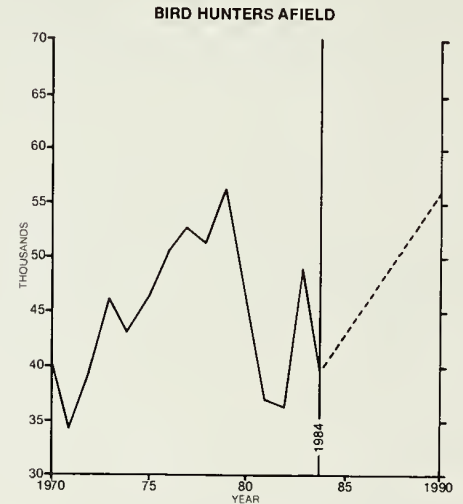
Possession limits have been increased to provide additional hunting opportunities for bird hunters who drive long distances to hunt.

FUTURE. The long-term future of the pheasant is closely tied to agricultural practices on private land. Intensifying land use trends reduce the quantity, quality and diversity of pheasant habitat. The Department will continue to provide technical advice and encourage land uses favorable to pheasants and other upland game birds.

The Hungarian partridge appears most capable of maintaining itself over extensive and diverse areas in the face of intensifying land-use changes. The Hun's wide distribution includes large areas of public rangeland.

The number of bird hunters afield is expected to return to pre-1981 levels by 1990.

STATEWIDE TRENDS AND OBJECTIVES PHEASANT, HUN AND CHUKAR





PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
The pheasant habitat base is being reduced by intensifying agricultural practices and conversion of agricultural land to other uses.	Encourage preservation of agricultural land and land practices that benefit these game birds. Discourage practices that eliminate pheasant habitat.	1	1	1	1	1	1	1	1
	Provide assistance and incentives to interested landowners to protect and enhance habitat.	2	2	2	2	-	3	2	2
	Protect riparian habitat where feasible by conservation easements, leases, or purchases.	3	7	3	3	5	2	4	3
	Improve pheasant habitat where feasible on FWP lands.	4	6	4	6	2	5	-	6
Restricted access to private land reduces public opportunities to hunt pheasants.	Minimize the negative effects of hunters and provide assistance and incentives to private landowners to allow public hunting.	7	3	6	7	3	7	3	4
	Continue surveys to monitor population status, trends, production, and harvest.	5	5	5	4	1	4	-	5
Harvestable supplies of pheasants are not fully utilized in some areas.	Improve public understanding of the annual harvestable surpluses of gamebirds that can provide hunting opportunities, including controlled harvesting of hen pheasants.	6	4	8	5	-	6	5	7
	Monitor pesticide contamination levels and inform health authorities and bird hunters.	8	8	7	8	-	8	-	8
The potential for pesticide contamination exists in limited areas where chlorinated hydrocarbons may still be present.									



Prairie Grouse

OBJECTIVE BY 1990: To attain an annual harvest of 98,700 sharptails and 46,800 sage grouse, providing 67,000 hunting days to 41,000 bird hunters. Compared to 1984, this would be an increased harvest of 56% sharptails and 107% sage grouse, providing 29% more hunting days to 37% more hunters.

Sharptail grouse and sage grouse play an important role in providing Montana's bird hunters, bird watchers, and others with recreation and enjoyment. The springtime show by groups of prairie grouse displaying their courtship behavior is a favorite sight for bird watchers, photographers, and others who simply enjoy observing them. The sage grouse is the largest grouse in North America, the males being over twice the size of other native grouse.

STATUS. The Great Plains sharptail is most abundant in eastern and central Montana, where prairie and foothill grasslands are in reasonably good condition. Sharptails are distributed over about two-thirds of the state. Heavily grazed and extensively cultivated areas support only marginal populations.

There is a remnant population of Columbian sharptails in a small, grassland valley in northwestern Montana.

Sage grouse, as their name implies, are dependent upon sagebrush-grassland ranges for

1984 Prairie Grouse Harvest and 1990 Objectives

Region	Year	Harvest		Bird Hunters	Hunting Days		Grouse/Hunter	
		Sharptail	Sage		Sharptail	Sage	Sharptail	Sage
1	1984	-	-	-	-	-	-	-
	1990	-	-	-	-	-	-	-
2	1984	-	-	-	-	-	-	-
	1990	-	-	-	-	-	-	-
3	1984	1,264	1,946	3,488	1,530	1,894	.4	.6
	1990	1,700	6,800	6,000	1,500	5,700	.3	1.1
4	1984	18,910	6,590	10,114	12,980	5,784	1.9	.7
	1990	25,000	8,000	13,000	15,000	4,800	2.0	.6
5	1984	9,586	4,838	5,894	7,896	5,722	1.6	.8
	1990	12,000	10,000	6,000	7,100	6,700	2.0	1.7
6	1984	16,678	5,900	5,550	11,070	5,142	3.0	1.0
	1990	25,000	13,000	8,000	15,000	7,500	3.1	1.6
7	1984	16,690	3,370	4,992	12,050	3,006	3.3	.7
	1990	35,000	9,000	8,000	17,500	6,300	4.4	1.1
STATEWIDE	1984	63,128	22,644	30,038	45,550	21,836	2.1	.8
	1990	98,700	46,800	41,000	56,100	31,000	2.4	1.1



food and cover. Sagebrush leaves provide them with food during the harsh prairie winters.

Sage grouse are distributed over 38% of Montana, close to extensive stands of sage brush in eastern, central, and parts of southwestern Montana.

MANAGEMENT. Hunting is the most popular recreational use of prairie grouse. Prior to 1950, 20 counties were open to prairie grouse hunting, seasons were about 3 days long, and daily limits were 3 birds by species or in combination. All or parts of 46 counties were open to hunting in 1983, and seasons were more than 40 days long. Possession limits were recently increased.

These regulation changes have increased opportunities for bird hunters who travel long distances to hunt. Extensive areas of public land are available where these species flourish.

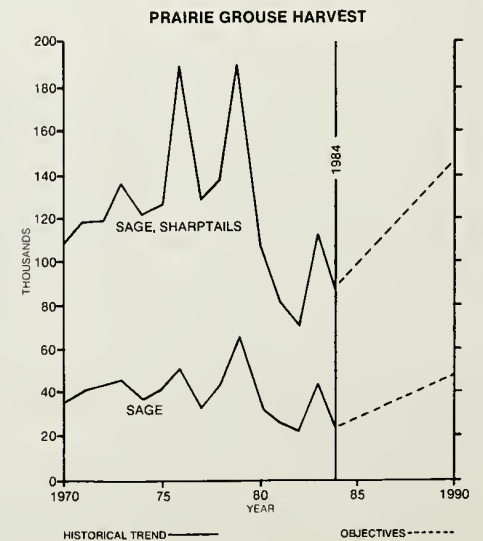
Annual sharptail harvests varied from 75,200 to 137,300 during 1971-80, with a 10-year

average of 93,500. Harvests ranged from 47,874 to 90,378 during 1981-84, averaging 64,351.

Annual sage grouse harvests varied from 34,600 to 66,400 during 1971-80, with a 10-year average of 44,100. Harvests ranged from 22,328 to 42,870 during 1981-84, averaging 34,212.

THE FUTURE. The future of sharptails and sage grouse, as well as the hunting recreation and nonconsumptive enjoyment they provide, will depend upon land stewardship and access to public and private lands. The Department will continue to provide technical advice and encourage consideration of prairie grouse needs in the management of public and private lands.

STATEWIDE TRENDS AND OBJECTIVES OF PRAIRIE GROUSE HARVEST AND HUNTERS





PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
Intensifying uses of range land are reducing the quality and quantity of prairie grouse habitat.	Support sound land-use policies on public and private lands. Discourage large scale "sodbusting" and sagebrush removal.	-	-	2	1	2	2	1	1
	Improve coordination with public land managers to recognize prairie grouse habitat needs in land use decisions.	-	-	1	2	3	1	4	2
	Provide assistance and incentives to interested private landowners to protect grouse habitat.	-	-	4	4	4	3	2	3
Population information is needed to properly assess prairie grouse population trends.	Monitor population status and trends.	-	-	3	3	1	4	-	4
Restricted access to private land reduces public opportunities to hunt prairie grouse.	Improve hunting access by providing assistance and incentives to interested landowners.	-	-	5	5	5	6	-	5
	Minimize excessive hunter concentrations by setting innovative seasons and by informing hunters of opportunities away from urban centers.	-	-	6	6	-	7	3	6



Mountain Grouse

OBJECTIVE BY 1990: To attain an annual harvest of 130,000 mountain grouse, providing 131,000 hunting days to 39,300 hunters. Compared to 1984, this would be an increased harvest of 150%, providing 70% more hunting days to 38% more hunters.

The three species of mountain-dwelling grouse in Montana (blue, ruffed, and spruce) provide many opportunities for quality upland game bird hunting. The springtime courtship displays of these native grouse are also enjoyed by many wildlife admirers and photographers. The sounds of the "hooting" blues and "drumming" ruffed grouse males are a special treat to springtime birdwatchers.

STATUS. Mountain grouse inhabit 38,000 square miles, or about 29%, of the state. National forests in the western and central part of the state provide a major share of their habitat. Private lands also provide essential parts of their habitat, such as the foothill areas important for blue grouse broods and the brushy stream bottoms used year-round by ruffed grouse.

MANAGEMENT. Prior to 1950, hunting was allowed in only eight western counties, seasons were two to four days long, and hunters were limited to three birds per day. Since 1964, hunters have been able to hunt

mountain grouse in 32 to 35 counties, seasons have been more than 2 months long and daily and possession limits have been increased. Hunting seasons extend from early September through late November, which allows hunters to take advantage of migratory blue grouse at lower mountain elevations in early fall and at higher elevations during mid-season. In 1983, possession limits were increased to four birds daily, increasing opportunities for hunters who travel long distances.

Bird hunters and grouse harvests declined abruptly during 1981-82 due to concerns about pesticide contamination. By 1990, the number of bird hunters in the five regions with mountain grouse is expected to increase to at least 39,000, a level similar to pre-1981 levels.

Annual mountain grouse harvests varied from 75,000 to 191,300 during 1971-80, with a 10-year average of 123,600. Blue grouse comprised 41% of the harvest, ruffed grouse 40%, and franklin (or spruce) grouse 19%. During 1981-84, mountain grouse harvests ranged from 52,194 to 84,017, averaging 62,413.

1984 Mountain Grouse Harvest and 1990 Objectives

Region	Year	Harvest	Hunters	Hunting Days	Grouse Hunter
1	1984	23,460	5,504	41,724	4.3
	1990	48,000	8,000	48,000	6.0
2	1984	14,690	3,486	20,768	4.2
	1990	35,000	5,500	38,500	5.0
3	1984	6,480	3,488	7,520	1.9
	1990	25,500	6,000	23,000	3.6
4	1984	5,496	10,114	6,166	.5
	1990	19,300	13,800	19,300	1.3
5	1984	1,390	5,894	1,506	.2
	1990	3,000	6,000	2,200	.5
6	1984	-	-	-	-
	1990	-	-	-	-
7	1984	-	-	-	-
	1990	-	-	-	-
STATE-	1984	52,194	28,486	77,684	1.8
WIDE	1990	130,800	39,300	131,000	3

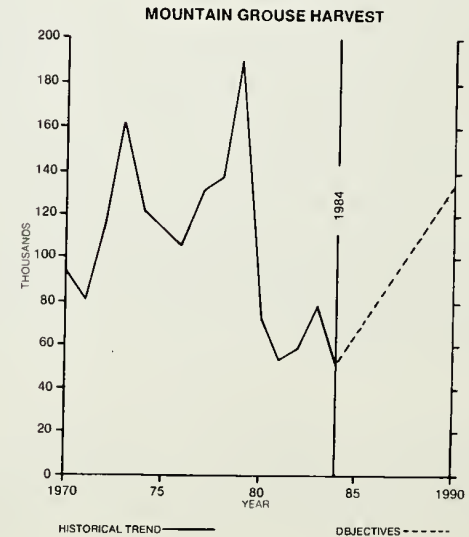
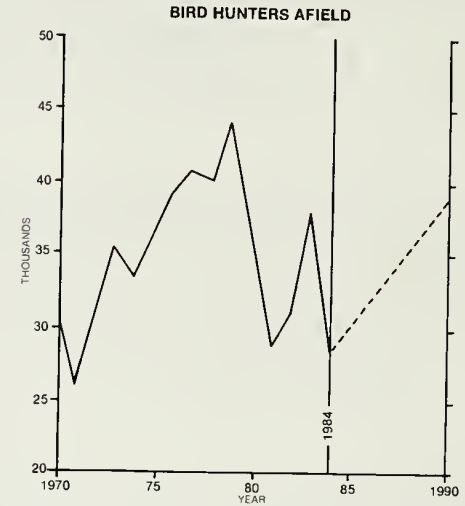


FUTURE. Mountain grouse can continue to provide abundant hunter opportunities because they live primarily on public land. However, long-term and local populations will be influenced by the intensity of timber and

grazing practices on all forest lands. The Department will encourage consideration for these species in land-use planning and management that impacts their habitats.

STATEWIDE TRENDS AND OBJECTIVES OF MTN. GROUSE HARVEST AND HUNTERS

PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
Intensifying forest land uses are reducing the quality and quantity of mountain grouse habitat.	Encourage forest land managers to continue to recognize grouse habitat requirements in land-use decisions regarding timber sales, road building, and grazing.	2	1	1	1	3	1	-	1
Reliable and economical means to monitor mountain grouse population status and trends over extensive areas are lacking.	Conduct biological studies as necessary to identify grouse habitat requirements.	3	3	2	3	2	-	-	2
Limited access to public forests reduces opportunities for grouse hunting in some areas.	Develop improved methods to determine population trends and grouse distribution.	1	2	3	2	1	-	-	3
Hunter concentrations reduce hunting success and quality of the sport in some areas.	Improve identification of public forest lands and secure public access where needed.	-	5	4	4	4	-	-	5
	Promote grouse hunting away from congested forest roads and after the early-season concentration of grouse hunters subsides.	4	4	5	5	-	-	-	4





Turkeys

OBJECTIVE BY 1990: To attain an annual harvest of 2,975 turkeys, providing 20,500 hunting days to 7,300 hunters afield. Compared to 1984, this would be a 38% increase in harvest, providing 59% more hunting days to 40% more turkey hunters.

Establishment of Merriam's turkeys in Montana has been a successful wildlife management accomplishment. The special attention given to this species by hunters in Montana, as well as nationwide, makes turkeys the "big game" of Montana's upland game bird species.

STATUS. Turkeys are not native to Montana; they were introduced initially into four sites: the Judith Mountains and Bull Mountains in 1954, the Long Pines in 1955, and near Ashland in 1957. These and other successfully transplanted areas are composed of mostly ponderosa pine-grassland. Rapid population increases in those areas permitted transplanting turkeys into 21 additional sites throughout the state. Not all of the introductions were successful, especially in western Montana. Wild turkeys are currently established on over 5,000 square miles of the state, although the majority occur in southeastern Montana.

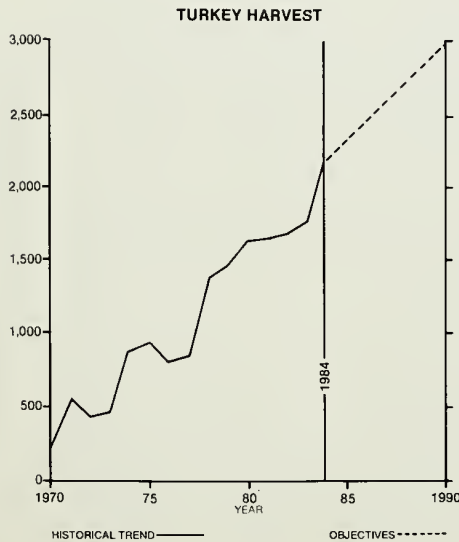
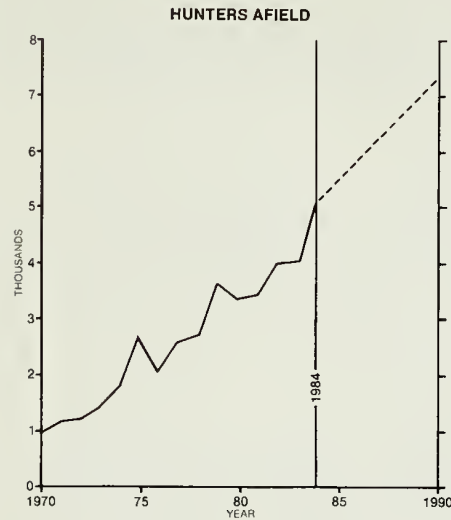
MANAGEMENT. The Montana turkey story is an example of how sustained yields of wildlife can be provided by annual hunting where

1984 Turkey Harvest and 1990 Objectives

<u>Region</u>	<u>Year</u>	<u>Harvest</u>	Hunters (tags) <u>Afield</u>	<u>Hunting Success</u>	<u>Hunting Days</u>	<u>Effort Days/Turkey</u>
1	1984	-	-	-	-	-
	1990	-	-	-	-	-
2	1984	-	-	-	-	-
	1990	-	-	-	-	-
3	1984	-	-	-	-	-
	1990	-	-	-	-	-
4	1984	-	-	-	-	-
	1990	75	300	25%	600	8
5	1984	792	1,344	59%	3,183	4
	1990	400	1,000	40%	2,400	6
6	1984	-	-	-	-	-
	1990	-	-	-	-	-
7	1984	1,361	3,707	38%	9,635	7
	1990	2,500	6,000	40%	17,500	7
STATEWIDE	1984	2,159	5,100	42%	12,913	6
	1990	2,975	7,300	40%	20,500	7



STATEWIDE TRENDS AND OBJECTIVES OF TURKEY HARVEST AND HUNTERS



suitable habitat exists. Since the first hunting season in 1958, more than 40,000 hunters have harvested over 14,000 turkeys while enjoying 90,000 days afield. Turkeys of both sexes have been legal quarry during each fall season since 1958; gobblers have been hunted in spring seasons since 1962. The overall average hunting success of 40% is high when compared to success rates in many other states with turkeys.

Annual turkey harvests ranged from 443 to 1,466 during 1971-80, averaging 942. From 1981-84, turkey harvests ranged from 1,654 to 2,159, averaging 1,827.

FUTURE. Increased interest in turkey hunting is expected. The number and distribution of turkey hunters and harvest on private land will require special attention. Land uses, such as heavy grazing and timber removal, are detrimental to turkey habitat in some areas, and energy development threatens additional areas. The Department is identifying critical habitat for turkeys and will encourage consideration for their welfare on both public and private lands.

PROBLEMS

Intensifying land uses are reducing the quality and quantity of turkey habitat.

Restricted access to private land reduces the availability of some turkey flocks to public hunting.

The population status and trend of turkeys is not well known in some areas.

Illegal harvest of turkeys.

STRATEGIES

Seek improved recognition for the habitat needs of turkeys on both public and private lands.

Seek improved understanding that a portion of turkey population can be harvested each year, while still sustaining ample breeding stock and turkeys for year-round viewing.

Provide assistance and incentives for private landowners to provide access for turkey hunting.

Trap and transplant turkeys to suitable areas, now void of turkeys, where hunting will be permitted.

Upgrade field surveys to determine the allowable rate of harvest of turkeys.

Reduce illegal harvest by encouraging public assistance in reporting illegal kills.

	Priority by Region							STATE
	1	2	3	4	5	6	7	
Intensifying land uses are reducing the quality and quantity of turkey habitat.	2	3	-	4	4	3	2	1
Restricted access to private land reduces the availability of some turkey flocks to public hunting.	4	2	-	5	2	2	1	3
Provide assistance and incentives for private landowners to provide access for turkey hunting.	3	4	-	2	5	-	-	4
Trap and transplant turkeys to suitable areas, now void of turkeys, where hunting will be permitted.	5	5	-	3	3	1	-	5
The population status and trend of turkeys is not well known in some areas.	1	1	-	1	1	-	-	2
Illegal harvest of turkeys.	6	6	-	6	6	-	-	6

Waterfowl

OBJECTIVES BY 1990: Achieve a fall flight index of 5,000,000 ducks from Montana breeding areas while providing a harvest of 300,000 ducks (80% mallards on 200,000 hunter days).

Achieve a fall flight of 80,000 Canada geese from Montana breeding areas; provide a harvest of 30,000 geese on 85,000 hunter days, and a harvest of 700 swans on 2,400 hunter days.

Maintain the current fall flight of doves and snipe from Montana nesting areas. Provide for a harvest of 120,000 doves, 100 cranes and snipe, and provide 30,000 days of dove hunting and 1,000 days of crane and snipe hunting.



Waterfowl are year-round favorites for many birdwatchers and provide quality recreational opportunities for up to 25,000 Montana waterfowl hunters each fall.

STATUS. Over 30 species of ducks, 4 species of geese, and many other migratory birds, including mourning doves, whistling swans, little brown cranes, coots, mergansers, and Wilson snipe, inhabit or visit Montana.

Montana borders Canadian provinces that offer some of the best waterfowl breeding range in North America. Montana is split into two flyways, the Pacific and Central. The best natural waterfowl breeding areas in Montana are in the glaciated prairie areas of Region 6 (Glasgow) and parts of the lower Flathead Valley. The numerous stock-watering ponds and reservoirs of eastern Montana contribute significantly to waterfowl production.

Drought and intensifying land uses on the prairies have been unfavorable to waterfowl. Major species, such as mallards and pintails, show serious declines.

MANAGEMENT. From 1975 to 1981, the annual waterfowl harvest in Montana ranged from 178,000 to 230,000 ducks and 12,000 to 19,600 geese. About 70% of the duck harvest and over 60% of the goose harvest occurs in the Pacific Flyway of Montana. The Pacific Flyway includes approximately the western half of Montana and has about 70% of the waterfowl hunters afield. The Central Flyway has less waterfowl hunters, but hunters there enjoy the highest success in bagging both ducks and geese. Private land provides some of the best waterfowl hunting in the Central Flyway.

Some of the prime wetland habitat is publicly owned, such as the state waterfowl management areas at Freezout Lake, Ninepipe, Pablo, Warm Springs, and Fox Lake, and federal waterfowl refuges such as Bowdoin, Benton Lake, Medicine Lake, Red Rocks Lake, Ninepipe and Pablo. Agricultural lands provide a significant amount of hunting, particularly for the favored species, Canada geese and mallards.

Discovery of persistent insecticide residues in fatty tissues of waterfowl in 1981 resulted in warnings regarding the

consumption of waterfowl. As a probable result, the number of waterfowl stamps sold decreased from 27,500 in 1980 to 18,700 in 1981. Phasing out of the agricultural insecticides endrin and heptachlor has eased the concern.

Lead shot, ingested by feeding waterfowl, is poisoning some waterfowl throughout the flyways. A conversion to steel shot used for waterfowl hunting in most of the state is expected by 1990.

1984 Migratory Bird Harvest and 1990 Objectives

SPECIES	YEAR	HARVEST	HUNTERS	HUNTING
				DAYS
Ducks	1984	124,263	13,779	86,919
	1990	300,000	30,000	200,000
Geese	1984	23,070	11,023	63,674
	1990	30,000	17,000	85,000
Swans	1984	243	400	547
	1990	700	1,000	2,400
Cranes	1984	14	51	138
	1990	100	200	1,000
Doves	1984	3,974	7,122	1,514
	1990	120,000	40,000	30,000



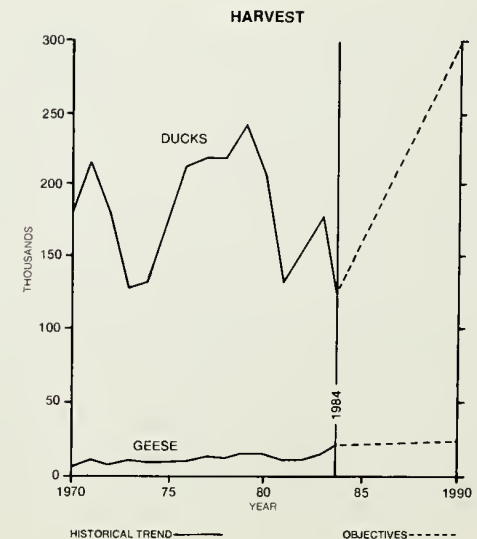
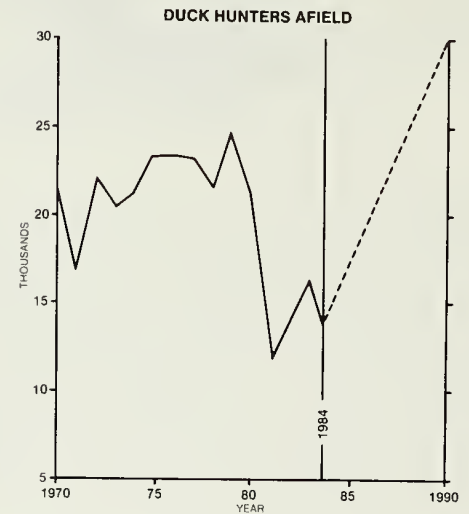
FUTURE. Waterfowl habitat is being lost due to intensifying land uses. State and federal programs that provide direction and incentives for protecting and improving waterfowl habitat on public and private lands will be encouraged. Waterfowl habitat improvement, funded by Ducks Unlimited, is

underway in Montana.

Public interest and support for preserving and enhancing Montana's remaining wetlands is crucial. Montanans can no longer rely on the Canadian provinces to supply all the waterfowl they desire.

STATEWIDE TRENDS AND OBJECTIVES OF WATERFOWL HARVEST AND HUNTERS

PROBLEMS	STRATEGIES	Priority by Region							STATE
		1	2	3	4	5	6	7	
The habitat base for waterfowl is declining because of expanding and intensifying land uses. Increased demands for hunting and viewing waterfowl are not being met.	Develop Habitat Incentive Program funded by a duck stamp or general advance incentive legislation.	-	1	2	-	3	2	1	1
	Seek improved recognition of waterfowl habitat needs by land management agencies.	1	3	3	1	2	1	2	2
	Develop additional public waterfowl areas in pertinent localities.	-	2	5	-	6	4	7	4
There is a need for better information to properly monitor waterfowl population status and trends.	Conduct surveys to monitor breeding populations, productivity, and seasonal distribution.	4	4	1	2	4	3	4	3
Restricted access to private land reduces public opportunities to hunt waterfowl.	Increase hunting access to private land by providing assistance and incentives to interested landowners.	2	5	6	3	-	7	3	5
	Improve procedures to minimize negative effects of waterfowl and hunters on private land.	3	7	-	-	-	9	6	8
Inter-agency problems sometimes preclude implementing waterfowl seasons best for Montana.	Increase input into federal-state meetings of the Pacific and Central Flyways to improve opportunities for Montana waterfowl hunters.	-	6	4	-	5	5	5	6
Other recreational uses conflict with needs of waterfowl in some areas.	Restrict conflicting recreational uses during critical waterfowl use periods.	5	8	-	-	-	8	9	7
The potential for pesticide contamination of waterfowl still exists.	Periodically monitor pesticide levels and advise the hunting public if and what precautions are recommended.	6	9	-	-	1	6	8	9





Furbearers

OBJECTIVES BY 1990: To upgrade furbearer management and minimize conflicts between furbearers, human health, private property, and agricultural values.

To provide furbearer trapping opportunities for up to 6,000 licensed trappers.

Furbearers provide a monetary return as well as hunting, trapping and nonconsumptive recreational opportunities to Montanans. Furbearers include animals listed in current fish and game laws--marten, otter, muskrat, fisher, mink, beaver, and bobcat; predatory animals--coyote, weasel and skunk; plus raccoon, badger, fox, lynx and wolverine. Some furbearers prey on livestock, damage property, or may carry diseases.

STATUS. The number of licensed trappers has been changing: 3,674 were reported in 1983 compared to 4,267 in 1982, 1,336 in 1975 and 565 in 1970. These numbers decreased to 3,561 in 1984; the price of a resident trapping license increased from \$10 to \$20 before the start of the 1984 season. Increased prices for long-haired fur stimulated interest in trapping. Coyote and fox made up about 12 percent by number and a high percentage of the monetary value of some 157,000 pelts taken from 14 species in 1979-80. The total number of pelts taken declined to about 72,000 in 1984-85. Estimates of predators and nongame species taken by hunting and predator control are not

HARVEST ESTIMATES AND FUR VALUES--1980-1984

	5-Year Average		1983	1984
	1980-1984			
Licenses Sold	4,122		3,674	3,561
Active Trappers	2,182		1,666	1,246

	No. Of	Aver.	No. Of	Aver.	No. Of	Aver.
	Pelts	Price	Pelts	Price	Pelts	Price
Mink	4,105	- \$15.57	2,595	- \$13.24	2,155	- \$15.66
Muskrat	54,457	- 3.07	35,480	- 2.91	25,849	- 2.73
Beaver	10,670	- 18.32	10,850	- 19.00	7,734	- 22.58
Weasel	775	- 1.08	692	- 1.08	244	- 1.66
Bobcat	1,153	- 206.90	1,029	- 211.00	1,382	- 235.76
Skunk	6,546	- 2.95	6,408	- 2.04	5,000	- 2.33
Coyote	9,587	- 50.35	10,797	- 42.53	6,729	- 53.24
Raccoon	6,781	- 16.46	8,670	- 12.01	3,731	- 15.54
Badger	2,201	- 18.53	2,910	- 17.37	1,361	- 20.55
Fox	7,306	- 35.69	9,437	- 31.10	5,787	- 25.48
Canada Lynx	57	- 272.12	53	- 260.61	59	- 398.95
Wolverine	9	- 166.86	7	- 200.00	6	- 241.25
Marten	1,585	- 23.39	1,112	- 29.83	1,248	- 36.45
Otter	42	- 32.63	42	- 28.14	43	- 48.67
TOTAL FUR VALUE		\$1,636,584		\$1,531,617		\$1,281,046



available, but probably exceed the harvest by licensed trappers several times over.

MANAGEMENT. Upgraded studies of furbearer population status, distribution, habitat requirements and the effects of harvesting and/or population control are underway. The Department has implemented management practices and plans associated with the federal reclassification of the bobcat, Canada lynx and wolverine. The federal export criteria is being fulfilled for the bobcat, lynx and river otter.

The general trappers license fee was increased from \$10 to \$20 by the 1983 legislature. This new revenue will be used to support improved research and management programs.

Our Department is improving beaver studies, particularly in western Montana, where beaver populations are more vulnerable. Beaver are being transplanted into suitable unoccupied habitat to increase both the ecological and fur-producing values of the beaver.

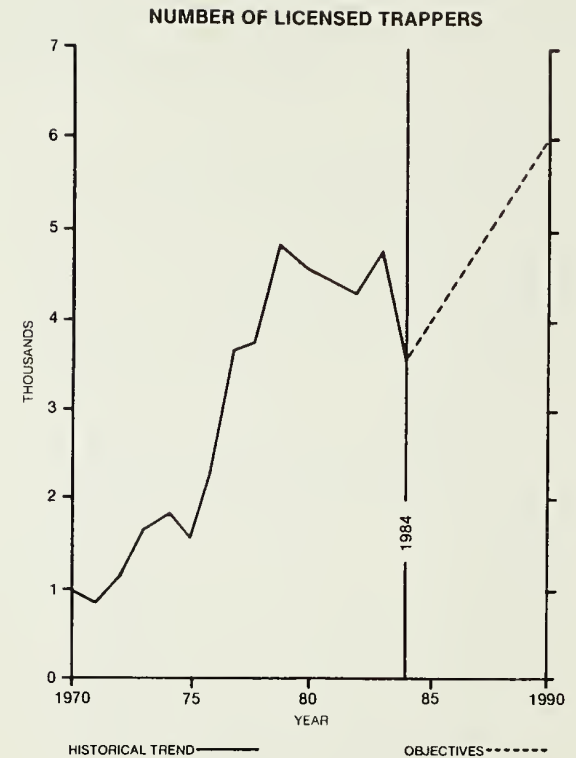
Cooperation will be continued with appropriate health and agricultural authorities to minimize or eliminate diseases transmitted through furbearers, predators, or nongame species to humans or livestock.

FUTURE. Upgraded studies are being considered for the fox, coyote, and bobcat in north-central Montana and for the river otter in the northwest. Studies of coyote-prey relationships are continuing.

A potential beaver study area is along the lower Yellowstone River. Better information is needed on beaver reproduction and the effects of trapping.

Rising fur values have substantially increased interest in "predator" hunting, especially for coyote and fox. Currently, there is no system to determine the number of participants, volume, and value of harvest or time spent hunting--primarily because of the lack of management authority and appropriate classification. A new hunting and trapping license, or a reclassification to place these species under the current license structure would provide a way to assess harvest, number of participants, success, and distribution of harvest. It would also help determine population trends. Increased license income would support additional research and management efforts for furbearing species.

Reclassification proceedings for the fox, raccoon, badger, and other fur-producing species should be implemented to establish appropriate management authority.





<u>PROBLEMS</u>	<u>STRATEGIES</u>	<u>Priority by Region</u>							<u>STATE</u>
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
The population status, trends, and habitat needs of many furbearers are not well enough known to ensure proper management.	Improve capability to match harvest regulations with allowable rates of harvest for specific species.	2	1	1	1	1	1	1	1
	Conduct basic research on selected species, including otter, beaver, bobcats, and fisher.	1	2	2	5	6	2	-	3
The habitat base for furbearers is declining because of expanding and intensifying land uses.	Protect furbearer habitat through improved coordination with public land managers to recognize furbearer needs.	3	3	3	2	2	4	-	2
	Provide assistance and incentives to interested private landowners to protect furbearer habitat.	-	5	6	6	3	8	-	8
Restricted access to private land reduces the availability of furbearers for harvest.	Improve procedures to protect landowners from negative impacts of trappers and furbearers (such as beaver) and seek landowner cooperation to allow furbearer harvesting.	5	6	7	7	4	7	4	4
	Seek means to better distribute trappers where necessary.	4	4	4	8	-	6	2	7
Some segments of the public do not accept or understand the rationale for harvesting furbearers.	Improve public and landowner awareness of the rationale for and benefits of harvesting furbearers.	-	7	9	3	5	5	-	6
	Develop a bobcat/lynx management plan to allow the Department to assume full management authority.	-	8	5	3	7	3	3	5



Nongame

OBJECTIVES BY 1990: To determine the distribution, population status, and habitat needs for 50 species of special interest or concern.

To develop comprehensive regional inventories of nongame species.

To develop an adequate funding base to support planned efforts.

To determine and monitor public use and enjoyment of nongame.

The majority (422) of vertebrate wildlife species (502) in Montana are nongame. These are animals not commonly pursued, hunted, or used for food, sport, or profit. They are enjoyed simply by observing or photographing them. Some species are sufficiently abundant to cause problems to farmers and ranchers, and sometimes city dwellers.

STATUS. Sixty-two species are of special interest or concern because little is known about their distribution. These species include the western bluebird, ferruginous hawk, and burrowing owl.

Species that become agricultural pests because of their abundance and feeding or digging habits include the Columbian ground squirrel, Richardson's ground squirrel, and blackfooted prairie dog. Additional knowledge is necessary to control populations without harming other species in their communities.

MANAGEMENT. While responsibility for nongame wildlife was given to the Department in 1973,

corresponding and commensurate funding was not. Investigations of nongame animals, funded by hunting license fees and federal aid money, were subsequently limited to: identifying small mammals associated with 41 different habitats statewide, short-term research on burrowing owls and white-tailed prairie dogs, annual surveys of raptor abundance, and assessing reproductive success of western bluebirds and ferruginous hawks. Such information is needed to effectively manage all nongame species.

The 1983 Legislature provided Montana taxpayers with an opportunity to fund the state's nongame program by donating part of their state income tax refund toward this effort.

FUTURE. With implementation of the income tax check-off for funding the nongame program, an important milestone was reached in the development of this program for the future. However, additional progress in this area is essential if the program is to survive and become a significant part of the Department's overall wildlife management

efforts. The current check-off law will be evaluated by the 1987 Legislature.

State law currently restricts nongame activities to research and public education. Present plans identify the following projects for implementation:

- 1) nongame wildlife inventory on Department-owned lands;
- 2) statewide raptor survey route system;
- 3) public education on bluebird conservation;
- 4) status and trend of nocturnal raptors in Montana;
- 5) status of colonial nesting waterbirds in Montana;
- 6) nature trail development; and,
- 7) public information brochures for selected Wildlife Management Areas.

While these projects will address immediate needs, other projects will be needed within the planning period to achieve program goals. Of 79 vertebrate species of special interest or concern, the needs of 21 will be addressed through other Department programs. Basic surveys and status investigations for the remaining 58 species are a sole function of



the nongame program. Even if this is all accomplished, only a portion (12 percent) of Montana's nongame species will have received attention from this program.

Clearly, much needs to be done to develop a program to ensure the continued welfare of these neglected wildlife species.

PROBLEMS

The needs of nongame species are not well understood by the public.

Intensifying and expanding land uses are reducing the habitat base for many nongame species.

Little is known about many nongame species' population status, trends, and habitat needs.

Some nongame species cause problems in agricultural areas.

STRATEGIES

Improve public awareness of nongame management needs.

Support and promote sound management of soil and water resources.

Seek recognition of nongame habitat needs in USFS and BLM land use plans.

Recognize nongame resources in stream preservation laws.

Incorporate protective measures for nongame wildlife and habitat during energy and mineral exploration and extraction.

Develop a biological information base for management of nongame species.

Minimize nongame damage to agricultural lands.

PRIORITY

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Endangered Species

OBJECTIVES BY 1990: Establish and/or maintain at least five occupied peregrine falcon eyries.

Locate, describe, and monitor reproduction on at least 70 bald eagle breeding areas.

Work with the U.S. Fish and Wildlife Service to develop necessary laws and regulations for controlling wolf numbers and distribution, and then obtain long-term Section 6 funding to implement an effective program of wolf management and research.

Document all occurrences of migrant or summering whooping cranes.

Define the presence of Woodland Caribou in northwestern Montana.

Locate and maintain at least one viable population of black-footed ferrets.

Endangered species are those in danger of becoming extinct. In Montana, the northern Rocky Mountain wolf, black-footed ferret, peregrine falcon, and whooping crane are endangered species. (Federal statutes also include the bald eagle as being endangered.) The classification is intended to make people aware of the precarious future of these species, to encourage obtaining more information about their needs to prevent their further demise, and to improve their status so they are no longer endangered.

STATUS. Special problems are involved in managing Montana's endangered species. Mismanagement can result in complete disappearance. Extinction of a species is unacceptable. Loss of a species would deprive future generations of an immeasurable quality of life.

MANAGEMENT. To the best of our knowledge, no black-footed ferrets exist in Montana; a few remain in Wyoming. Wolves exist in only a few locations and in very low numbers. These

species are of concern to ranchers because their presence may preclude land management practices, and wolves sometimes kill livestock. Ferrets prey on prairie dog populations. Additional information is needed on these species to evaluate their status.

Peregrine falcons, whooping cranes, and bald eagles are migratory, so Montana is only one of many states and federal wildlife agencies contributing to the growing pool of knowledge concerning these species. These species inhabit public and private (agricultural) lands in Montana. Falcons are being reintroduced to selected sites. Their reestablishment in those areas is being monitored. Movements of whooping cranes and bald eagles in the state and the habitats they use while here, also are being studied. This information is valuable in assuring their survival and in developing management plans.

FUTURE. Federal funds are available to the Department through Section 6 of the Endangered Species Act. These funds are available annually for endangered species recovery projects. Together with private grant funds, they form the back-bone of the Department's endangered species projects.

As a result of peregrine falcon reintroduction, Montana now boasts the first pair of resident breeding peregrines known for years. The parent peregrines fledged two young in 1984. The reintroduction program is scheduled to continue through the planning period, and if a similar success rate is achieved, the peregrines will easily surpass the 1990 goal!

For bald eagles, a strong program of interagency coordination and liaison will allow the Department to accurately document the dynamics of population expansion. In 1984, Montana realized a 15% increase--from



40 to 46--in occupied breeding territories. Since "first year" breeding eagles have a lower success rate than older birds, net productivity tends to lag somewhat behind expansion of the breeding population. Even so, Montana bald eagles are among the most productive in North America.

Future Department studies will focus on the habitat preferred by eagles. This, will allow us to identify potential habitats and conserve them for use by an expanding eagle population. Again, like the peregrine, bald eagles may surpass the 1990 goals if current success is maintained.

For black-footed ferrets, the future is less clear. Searches for ferrets are underway and are planned to continue. If a population is located, management programs will be developed in consultation with affected landowners. Thus far, only circumstantial evidence of ferrets has been found. Location of a healthy population would provide added impetus to ferret recovery which could eventually lead to down-listing or delisting of the species.

Wolf populations in Montana are low, and probably are represented only by scattered singles and pairs. However, strong populations can be found to the north in British Columbia and Alberta. The ability of wolves to travel long distances makes this species difficult to manage. The Department's ability to control wolf numbers and distribution is essential to ensuring future recovery of the wolf in parts of Montana.

PROBLEMS

Recovery of endangered species is dependent on public understanding and support.

Failure to increase low population levels of these species could result in extinction of the species from Montana.

Intensifying land uses threaten key habitat of endangered species.

Insufficient information is available to properly monitor the status and trend of these species and their habitats.

Certain pest control practices are a threat to endangered species.

Illegal killing of endangered species.

STRATEGIES

Promote public acceptance of the value to society of the species listed as endangered.

Encourage population recovery through procedures presented in Recovery Plans, including species introductions when and where appropriate.

Seek improved consideration of endangered species requirements by land managers and agencies.

Develop management guidelines for bald eagle breeding and wintering habitats.

Improve the management information base through appropriate biological surveys.

Evaluate alternative methods of pest control to avoid secondary poisoning of non-target species.

Implement education efforts, public assistance, and innovative law enforcement to prevent illegal kills.

PRIORITY

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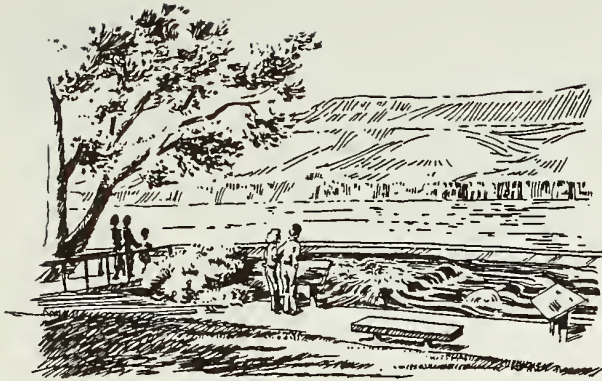
PARKS PROGRAM

Department Sites

Elements: State Recreation Areas
 Sportsman Access
 State Parks
 State Monuments

Off-Site Recreation

Elements: Recreational Waterways
 Boating
 Snowmobiling
 Community/Statewide Recreation
 Recreation Roads and Trails
 State Capitol Complex Grounds



PARKS PROGRAM

GOAL: To manage Montana's scenic, historic, archaeological, and recreational resources to meet present and future needs.

We were given management responsibility for outdoor recreation in Montana in 1965. Since then the Parks Program has provided many new opportunities for recreational, historical, and archaeological interests.

The Program is divided into Department Sites and Off-Site Recreation. Department Sites are lands we purchase, classify, and manage as a base for recreational, cultural, or scientific uses of the State Park System. We also manage six Off-Site Recreation elements by programming, regulating, and providing facilities for recreational or cultural activities.

We're mandated by law to conserve these natural and cultural resources for the use and enjoyment of the people. Our management activities include land acquisition, capital construction, law enforcement, interpretation, the provision of information, operations, general maintenance, and coordination with other agencies.

STATUS. During 1984 our Department sites hosted more than 4.5 million visits. Off-site elements hosted 18.4 million--over four times the visits to Department sites.

MANAGEMENT. Providing for recreational use is an important part of our goal. We will continue to manage, preserve, and enhance the state's resources upon which those uses depend by:

1. Operating and maintaining park system sites.
2. Acquiring and developing land for outdoor recreation.
3. Funding state and community recreation facilities with federal Land and Water Conservation Fund (LWCF) grants.
4. Providing snowmobile access facilities, trail grooming, and safety.
5. Providing boating access facilities and safety.

FUTURE. The management strategies that will guide Montana's Parks Program through 1990 are listed on the following pages for each of the 10 program elements of the Parks Program. Our five priorities for each are:

1. Defining and managing a quality Park System.
2. Managing recreational use of rivers.
3. Maximizing the economic benefits of recreation to Montanans.
4. Increasing program visibility and citizen participation.
5. Making innovative use of existing operational resources.



Department Sites

OBJECTIVES BY 1990: To provide for a 4 percent increase in visits; to increase the number of Park System sites by 13 percent; to increase user satisfaction by 9 percent; and to increase our enforcement of park regulations by 32 percent over 1984 levels.

The following pages outline strategies for our State Park System under four separate elements: state recreation areas, sportsman access, state parks, and state monuments.

STATUS. Since the last strategic plan was published in 1978, the number of Park System sites has increased by 29 percent from 261 to 336 in 1984. Acreage has increased by 16 percent from 89,688 to 103,846 and annual visitation by more than 80 percent, from 2.5 million to more than 4.5 million. Our 1985 outdoor recreation needs survey reported that nearly 74 percent of the people said the state provides the quality of recreation they desire.

MANAGEMENT. In 1984 about \$2.5 million was spent on operation, maintenance, and development--66 percent on maintenance alone. The state legislature has also allocated fishing license revenue for fishing access acquisition and coal tax revenue for park acquisition. These sources account for almost all our growth since 1979.

Maintenance, development, and acquisition levels are controlled by carefully "earmarking" revenue from licenses, general fund, motorboat fuel taxes, coal severance taxes, federal Land and Water Conservation Fund (LWCF) grants, and park user fees, according to the type of use being planned for.

THE FUTURE. Our management strategies are intended to help meet our objectives. We intend to:

1. Ensure that maintenance and development keep pace with increased use to retain the strong public support we have for additional sites.
2. Change funding criteria so that earmarked revenue sources can be used to address changing needs.
3. Increase information, education, and enforcement efforts that address priority needs.
4. Find stable funding sources to counteract decreasing state revenue from the General Fund and federal revenue from the Land and Water Conservation Fund due to federal deficits.
5. Manage for quality and diversity by using comprehensive Park System criteria and standards.

OBJECTIVES BY 1990

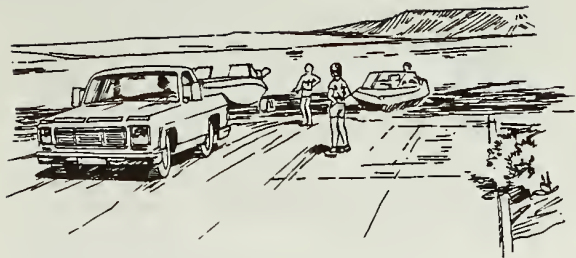
REGION	YEAR	VISITS ¹	NO. OF SITES ²	ACRES ²	USER SATISFACTION ³	ENFORCEMENT RATE ⁴
1	1984	778,100	48	3,604	79.1	12
	1990	815,300	59	4,312	75	25
2	1984	633,700	64	4,648	76.8	23
	1990	554,600	66	5,067	80	25
3	1984	620,300	60	62,987	77.8	6
	1990	768,900	83	64,606	80	25
4	1984	616,500	59	7,556	73.1	13
	1990	610,500	59	7,556	78	25
5	1984	654,700	44	3,445	67.8	34
	1990	747,500	44	3,481	81	30
6	1984	98,900	14	3,760	64.2	72
	1990	95,500	14	3,760	76	25
7	1984	430,300	20	14,431	71.1	8
	1990	585,700	29	21,043	80	30
Canyon Ferry	1984	717,600	27	3,415	-	-
	1990	538,400	27	3,358	-	-
STATEWIDE	1984	4,550,100	336	103,846	73.5	19
	1990	4,716,400	381	113,183	80	25

¹1984 data from traffic counts + 15% off-season use.

²1984 data from Department land files.

³Satisfaction Levels, Table 15, 1985 Montana Outdoor Recreation Needs Survey.

⁴Number of violation reports completed per 1,000 enforcement hours.



These sites provide a broad selection of outdoor recreation opportunities in a natural setting that can be used by large numbers of people. They contain natural or man-made resources that attract visitors from beyond the local area.

STATUS. In 1984, our 78 state recreation areas received more than two million visits from Montana residents and tourists. Although the areas comprise only 23 percent of our Park System sites, they receive 46 percent of the total use--more than any other Park System element.

MANAGEMENT. Natural environment and aesthetic qualities are emphasized even where development requires alteration. Aesthetic qualities are retained to the greatest degree possible. Water is a prime recreational attraction in Montana; nearly all our state recreation areas feature a lake or river. (A major source of operational revenue is the motorboat fuel tax). Park concessions

State Recreation Areas

OBJECTIVES BY 1990: To provide for about the same number of visits as at present; to increase the number of recreation areas by 1 percent; and to increase recreation area acreage by 4 percent over 1984 levels.

OBJECTIVES BY 1990

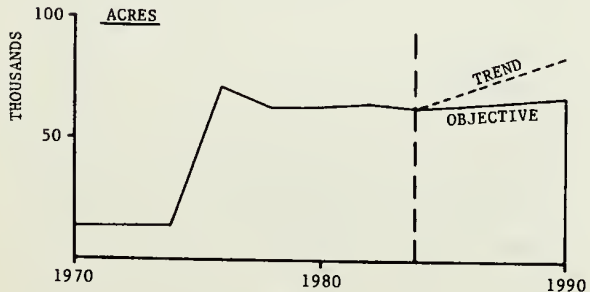
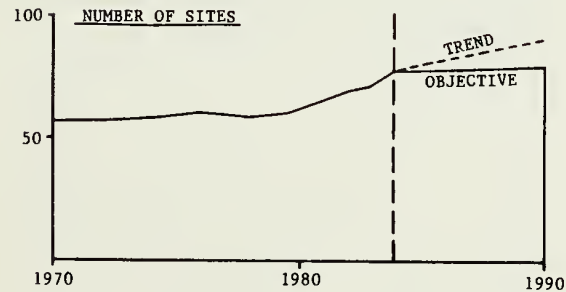
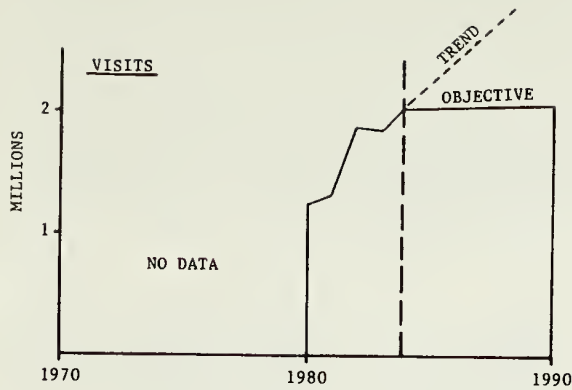
<u>REGION</u>	<u>YEAR</u>	<u>VISITS</u> ¹	<u>NO. OF</u> <u>SITES</u> ²	<u>ACRES</u> ²
1	1984	442,500	16	392
	1990	459,200	15	380
2	1984	193,800	6	472
	1990	78,300	7	852
3	1984	10,000	1	54,257
	1990	10,000	1	54,257
4	1984	165,900	17	640
	1990	188,600	17	640
5	1984	334,400	4	837
	1990	345,000	4	1,713
6	1984	24,000	3	2,745
	1990	39,200	3	2,745
7	1984	212,100	6	1,520
	1990	402,500	8	2,800
Canyon Ferry	1984	703,100	25	2,964
	1990	526,800	25	2,907
STATEWIDE	1984	2,075,800	78	63,827
	1990	2,049,600	79	66,294

offering goods and services and camping and other user fees also offset operational costs.

FUTURE. More recreation use and additional areas are increasing operational costs. We will try to offset costs by using more park concessions and user fees where appropriate and balancing acquisition, development, and maintenance funding. We will also make long-range plans for additional law enforcement at popular areas and during holiday periods, for adding and upgrading recreation facilities and programs, for acquiring high priority sites, and for disposing of poorly located sites.

¹1984 data from traffic counts + 15% off-season use.

²1984 data from Department land files.



PROBLEMS

User satisfaction could be improved by increased maintenance.

Some facilities are unsafe, causing resource damage and law enforcement problems.

We need long-range goals and objectives.

Illegal activities reduce public benefits and increase program costs.

Information on recreation and the State Park System is inadequate.

The need for park and public recreation land is increasing.

We need development standards promoting the best of the State Park System.

STRATEGIES

Secure legislative support for manpower and funding.

Establish day use fee, expand user fees.

Secure legislative support for capital improvements.

Develop and maintain properly or close.

Consider special needs of sites near urban areas.

Develop goals and objectives for a model Park System.

Increase funding for law enforcement personnel and equipment.

Increase law enforcement visibility during peak use with roving patrols and ex-officios

Increase information efforts with brochures, ads, and public contacts.

Continue coal tax acquisition program.

Set acquisition priorities.

Acquire more areas of state-wide significance for multiple recreational uses.

Complete management plans for major sites.

Better opportunities to view wildlife should be integral to development.

Priority by Region

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>STATE</u>
Secure legislative support for manpower and funding.	2	1	4	1	1	-	1	1
Establish day use fee, expand user fees.	4	-	5	-	-	-	-	8
Secure legislative support for capital improvements.	1	2	-	6	2	-	2	4
Develop and maintain properly or close.	3	-	-	2	-	-	4	-
Consider special needs of sites near urban areas.	-	-	3	-	6	-	-	-
Develop goals and objectives for a model Park System.	-	4	1	-	4	-	-	2
Increase funding for law enforcement personnel and equipment.	5	5	8	-	3	-	-	3
Increase law enforcement visibility during peak use with roving patrols and ex-officios	-	6	-	4	-	-	5	7
Increase information efforts with brochures, ads, and public contacts.	7	-	-	5	7	-	-	5
Continue coal tax acquisition program.	-	-	-	-	5	-	3	6
Set acquisition priorities.	-	3	-	3	-	-	-	-
Acquire more areas of state-wide significance for multiple recreational uses.	-	7	2	-	-	1	6	-
Complete management plans for major sites.	-	6	2	6	-	-	-	-
Better opportunities to view wildlife should be integral to development.	-	-	7	-	-	2	-	-



Sportsman Access

OBJECTIVES BY 1990: To provide for a 10 percent increase in visits; to increase the number of access sites by 16 percent; and to increase access site acreage by 14 percent over 1984 levels.

Access areas provide public recreation access to land-based and water-based sites for fishing, hunting, floating, and other recreational activities.

All sites are presently classified as state fishing access sites--chosen to provide permanent, public access to high-quality rivers, streams, and lakes in order to satisfy important objectives in the fish and wildlife programs.

STATUS. The second most popular Park System element, the 229 access sites received 1.7 million visits in 1984, mostly by Montana residents. The sites account for 68% of the State Park System.

MANAGEMENT. The management goal is to provide good safe access for the protection of on-site resources and adjacent private land. Only minimum facilities and developments are allowed consistent with recreation use and resource protection.

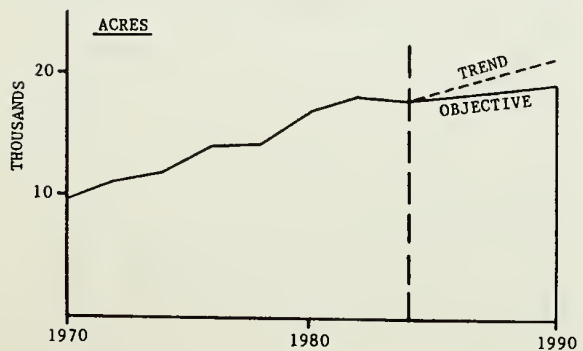
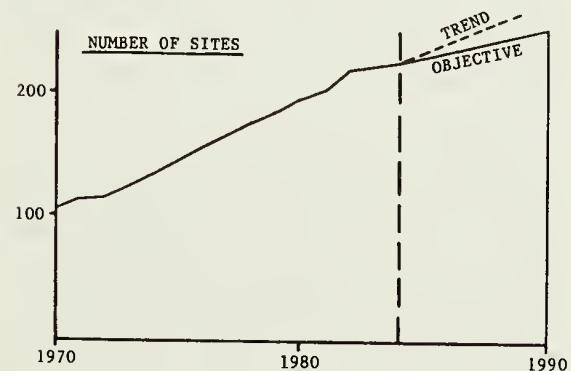
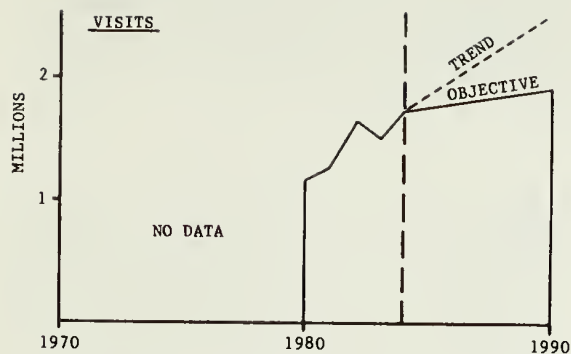
OBJECTIVES BY 1990

REGION	YEAR	VISITS ¹	NO. OF SITES ²	ACRES ²
1	1984	213,300	29	721
	1990	259,100	40	1,440
2	1984	397,100	54	3,961
	1990	438,600	55	4,000
3	1984	486,100	52	4,460
	1990	575,000	70	5,560
4	1984	201,000	37	4,961
	1990	195,800	37	4,961
5	1984	220,200	36	2,253
	1990	287,500	36	2,253
6	1984	68,100	9	745
	1990	54,100	9	737
7	1984	145,400	10	617
	1990	105,000	16	1,400
Canyon Ferry	1984	27,700	2	451
	1990	11,600	2	451
STATEWIDE	1984	1,759,000	229	18,169
	1990	1,926,700	265	20,802

FUTURE. We're finding that many of our state fishing access sites serve as access to recreational floating and hunting as well as to fishing. The demand grows for purchase of lands that serve a variety of recreational, hunting, and fishing access needs, and for wildlife habitat preservation.

¹1984 data from traffic counts + 15% off-season use. Predominate uses are associated with fishing, which is measured in fish program.

²1984 data from Department land files.



PROBLEMS

User satisfaction could be improved with increased maintenance.

Land is needed for multiple access and habitat.

Some facilities are unsafe, causing resource damage, law enforcement problems, and low satisfaction.

Illegal activities reduce public benefits and increase program costs.

STRATEGIES

Secure legislative support for adequate manpower and funding.

Outline goals, rank needs.

Increase public, legislative, and landowner acceptance.

Acquire more areas of state-wide significance for multiple recreational uses.

Acquire access to federal/state lands where additions to Park System are needed.

Secure legislative support for capital improvements.

Develop and maintain properly or close.

Update statewide development guidelines and allocation system.

Development criteria must consider maintenance and enforcement cost.

Increase funding for law enforcement personnel and equipment.

Increase law enforcement visibility during peak use with roving patrols and ex-officio.

Priority by Region

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>STATE</u>
1	1	4	1	1	-	2	1

7	5	-	3	5	3	-	2
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6	7	-	-	7	4	4	6
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-	6	3	-	-	1	1	4
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-	-	2	-	-	2	3	-
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3	2	1	5	2	-	5	3
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2	-	-	2	4	-	-	5
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-	3	-	-	6	-	-	-
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4	4	-	-	8	-	-	-
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5	5	5	4	9	-	8	-
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State Parks

OBJECTIVES BY 1990: To preserve and interpret unique values while providing for a 9 percent increase in visits; and to increase the number of parks by 45 percent and increase park acreage by 53 percent (through land trades and reclassifications) over 1984 levels.

State parks are often referred to as the "crown jewels" of Montana's State Park System. Here we try to provide high-quality recreation: distinctive and notable enough to attract people on a state, regional, or national basis. State parks are open-space areas of unique scenery or other outstanding natural features of an aesthetic, historical, geological, archaeological, or scientific nature.

STATUS. Eleven state parks made up about 3 percent of our State Park System sites in 1984 and hosted 512,300 visitors--about 11 percent of total park system use. Although use is often controlled to preserve unique resources, state parks are one of Montana's principal state-operated tourist attractions.

MANAGEMENT. Development of roads and desirable facilities is carried out with precise and sensitive regard for all natural features. Management strives to retain ecological features and values.

OBJECTIVES BY 1990

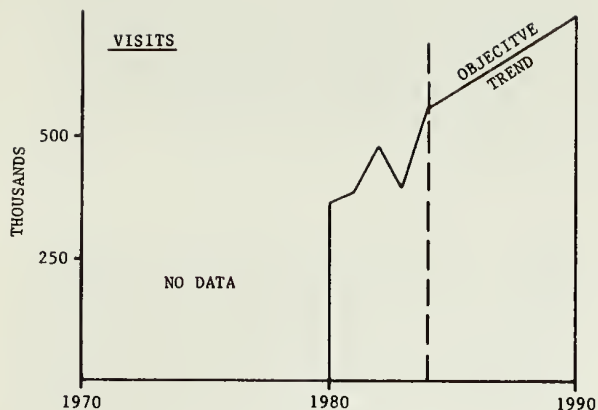
REGION	YEAR	VISITS ¹	NO. OF SITES ²	ACRES ²
1	1984	122,200	3	2,491
	1990	92,000	3	2,491
2	1984	13,200	1	25
	1990	13,600	1	25
3	1984	117,200	4	3,580
	1990	155,200	7	4,059
4	1984	197,100	1	117
	1990	220,900	1	117
5	1984	0	0	0
	1990	0	0	0
6	1984	0	0	0
	1990	0	0	0
7	1984	62,600	2	9,150
	1990	74,700	4	16,751
STATEWIDE	1984	512,300	11	15,363
	1990	556,400	16	23,443

FUTURE. We are at a crossroads in State Park management. Use is increasing at existing state parks while the demand grows for the preservation of additional areas. In 1983 state/federal land trades greatly increased the acreage of Makoshika State Park while reducing the acreage of Rosebud Battlefield State Monument, which may also be reclassified as a State Park in the future.

We need long-range goals and objectives for our parks. Many are not developed to their full potential due to funding limitations. Others are threatened by resource exploitation or rural subdivision. Maintenance and development levels differ from park to park. Our management strategies are to define the "State Park experience" and the quality levels we need to produce as part of that experience.

¹ 1984 data from traffic counts + 15% off-season use.

² 1984 data from Department land files.



PROBLEMS

User satisfaction could be improved with increased maintenance.

Some facilities are unsafe, causing resource damage, law enforcement problems, and low satisfaction.

We need long-range goals and objectives.

Illegal activities reduce public benefits and increase program costs.

The public needs more information on recreation and the State Park System.

Parks and recreation needs additional land.

We need development standards promoting the best of the State Park System.

STRATEGIES

Secure legislative support for increased maintenance, manpower, and funding.

Develop management plan when site acquired.

Redistribute money and manpower between divisions, regions, and headquarters.

Secure legislative support for increased capital improvements funding.

Develop and maintain properly or close.

Develop goals and objectives for a model Park System.

Increase funding for law enforcement personnel and equipment.

Increase public information efforts.

Outline goals and rank needs.

Acquire more areas of state-wide significance for multiple recreational uses.

Continue coal tax acquisition program.

Establish development hierarchy for the Park System.

Priority by Region							STATE
1	2	3	4	5	6	7	
1	1	6	2	1	-	1	1

-	-	-	4	-	-	-	7
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-	-	-	-	7	1	7	-
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5	2	4	3	-	4	2	4
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2	-	-	1	-	-	3	-
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-	4	2	-	-	-	-	2
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3	5	-	-	4	-	-	3
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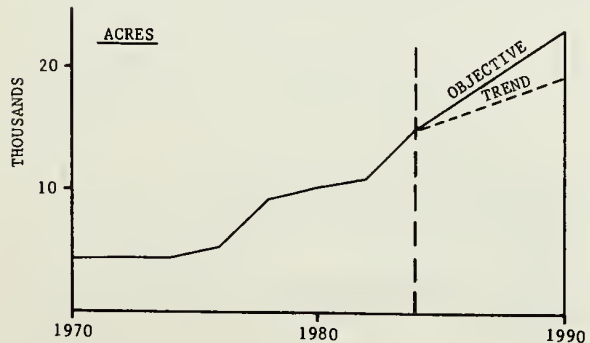
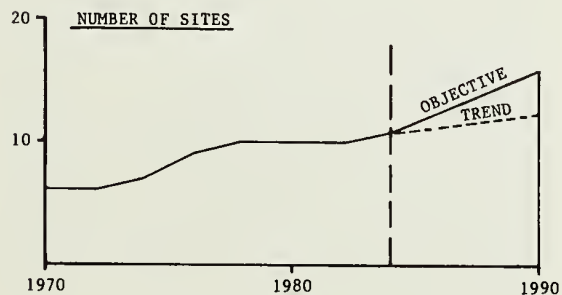
4	-	5	6	5	-	6	5
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-	3	-	5	3	-	-	6
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-	7	1	-	6	2	4	-
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-	-	8	-	-	3	-	-
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-	-	3	-	2	-	-	-
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State Monuments

OBJECTIVES BY 1990: To preserve and interpret unique values while providing for a 7 percent increase in visits; to increase the number of monuments by 11 percent; and to decrease total monument acreage to 54 percent (through land trades and reclassifications) of 1984 levels.

Montana's state monuments preserve, protect, and enhance objects, features, or places of historical, geological, archaeological, or scientific importance, including the commemoration of outstanding persons or events. We try to provide day-use facilities to protect and enhance the value of the site.

STATUS. A total of 18 state monuments made up about 5 percent of our State Park System sites in 1984. These sites accounted for 172,300 days of recreation on 6,487 acres. State monuments account for 4 percent of total Park System use. Preservation and education are higher priorities than recreation at these areas.

MANAGEMENT. Development often includes road access, parking, latrines, and water. Overnight camping is ordinarily not allowed. Development includes restoration of historical structures, installation of protective devices, development of museums, outdoor dioramas, and other interpretive exhibits.

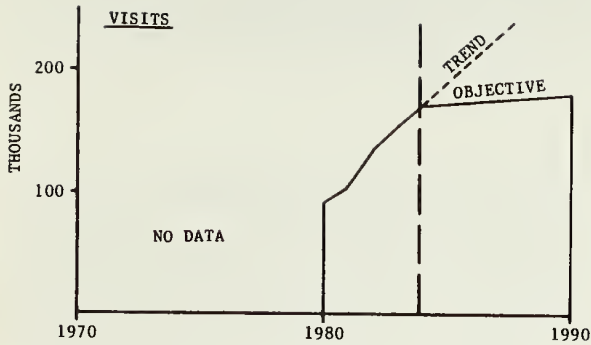
OBJECTIVES BY 1990

<u>REGION</u>	<u>YEAR</u>	<u>VISITS</u> ¹	<u>NO. OF SITES</u> ²	<u>ACRES</u> ²
1	1984	0	0	0
	1990	5,000	1	1
2	1984	29,600	3	190
	1990	24,100	3	190
3	1984	17,000	3	690
	1990	28,700	5	730
4	1984	8,600	4	1,838
	1990	5,200	4	1,838
5	1984	99,900	4	355
	1990	115,000	4	355
6	1984	6,800	2	270
	1990	2,200	2	270
7	1984	10,400	2	3,144
	1990	3,500	1	92
STATEWIDE	1984	172,300	18	6,487
	1990	183,700	20	3,476

FUTURE. We purchase state monuments to preserve and interpret Montana's rich scenic, scientific, and cultural heritage. As management criteria are better defined, some existing sites, such as the Rosebud Battlefield, may be reclassified as State Parks. We are in danger of losing many such sites to intensifying and conflicting land uses. Serious funding limitations prevent acquisition and preservation. Worse yet, preservation and interpretation are not guaranteed by land purchase alone, but only by developing a stable funding source for maintenance and development. Finally, we need interpretive programs and appropriate development standards to realize the full benefits of the heritage preserved by our state monuments.

¹1984 data from traffic counts + 15% off-season use.

²1984 data from Department land files.



PROBLEMS
 User satisfaction could be improved with increased maintenance.

Some facilities are unsafe, causing resource damage and law enforcement problems.

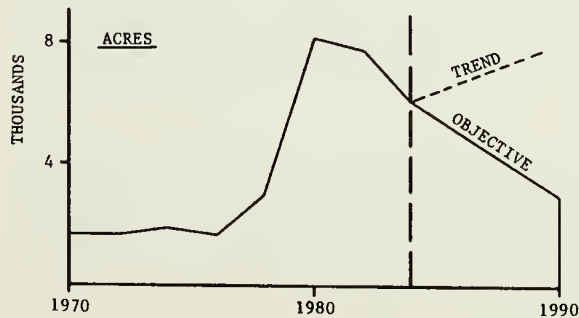
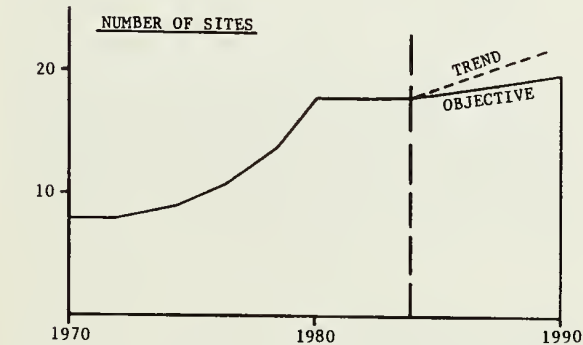
We need long-range goals and objectives.

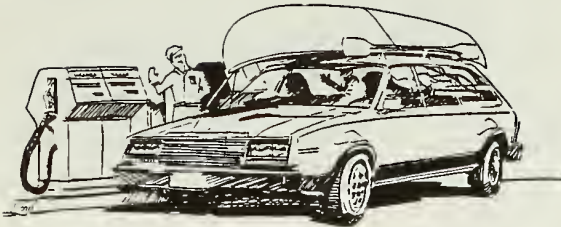
Illegal activities reduce public benefits and increase program costs.

Information on recreation and the State Park System is inadequate.

The need for park and public recreation land is increasing.

<u>STRATEGIES</u>	<u>Priority by Region</u>							<u>STATE</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
Secure legislative support for manpower and funding.	6	1	6	1	1	-	2	1
Pursue donations, volunteers, alternate funding.	5	7	8	-	5	-	-	8
Secure legislative support for capital improvements.	-	2	4	-	2	-	1	2
Develop and maintain properly or close.	7	-	-	2	-	-	-	-
Develop goals and objectives for a model Park System.	1	4	3	-	-	-	-	5
Increase funding for law enforcement personnel and equipment.	8	5	-	-	4	-	-	4
Increase information efforts with brochures, ads, and public contacts.	-	-	7	4	6	-	-	3
Increase on-site interpretive programs and devices.	-	-	5	-	-	-	3	7
Continue coal tax acquisition program.	3	-	1	5	-	2	5	6
Outline acquisition goals and prioritize needs.	2	3	2	3	3	-	4	-
Acquire more areas of state-wide significance for multiple recreational uses.	-	6	-	-	-	1	6	-
Increase public, legislative, and landowner acceptance.	4	8	-	-	-	-	-	-





Off-Site Recreation

OBJECTIVES BY 1990: To provide for a 8 percent increase in activity days of use over 1984 levels; and to develop objectives for quality levels and use levels where appropriate.

Off-site recreation includes six elements: recreational waterways and recreation roads and trails that are part of the State Park System; recreational boating and snowmobiling; community/statewide recreation and Capital Complex grounds that provide funding for a number of recreational and cultural activities and areas.

These elements share a common factor: it is not often necessary for us to purchase and manage a land base in order to provide for them. Our major management strategies rely on providing programming, regulation, facilities, maintenance, and coordination with appropriate land managers.

STATUS. Our 1983 recreation plan (SCORP) reported that Montanans and tourists alike spent more than 18 million activity days in off-site recreation activities in 1982.

MANAGEMENT. We manage these diverse recreational activities in several ways. Community/statewide recreation is supported by grants-in-aid. Recreational waterways management involves regulating use and access. Snowmobiling relies heavily on trail maintenance.

Management levels are determined by legislative authority to spend from "earmarked" revenues such as motorboat fuel taxes and federal LWCF grants. Elements supported by such revenues enjoy steady improvements in management quantity and quality. Elements without established revenue sources (such as recreational waterways and roads and trails) have made slower progress.

FUTURE. Our management strategies are intended to help us meet the objectives above. We intend to:

1. Assess our role and objectives for each program element.
2. Preserve and make available for use the resources upon which these recreational activities depend.
3. Adjust revenue sources as public needs change.
4. Increase information, education, and enforcement efforts that increase safety and reduce conflict and impact.
5. Respond to maintenance and facility needs with innovative approaches and programs.



Recreational Waterways

OBJECTIVES BY 1990: To provide for an estimated 7 percent increase in activity days of use over 1984 levels; to develop formal management plans for the Blackfoot and Smith rivers; and to develop objectives for quality levels.

For many years we've developed the natural and historical values of state waterways while providing opportunities for enjoyment of these values. We've usually undertaken this task informally on rivers or streams with the potential to satisfy objectives important to fish, wildlife, and parks.

STATUS. More than 600,000 activity days were spent by Montanans and tourists canoeing and floating the state's rivers in 1982, according to our 1983 SCORP plan--more than the number of visitors to our 10 state parks that year.

We have provided informational floating guides on several rivers. On the Blackfoot and the Smith rivers we've established formal river management programs to reduce recreational and landowner conflicts.

MANAGEMENT. Management primarily involves monitoring and recommending mitigation for disruptive land uses, maintenance of public

areas, and regulating and reducing the impacts of recreational use.

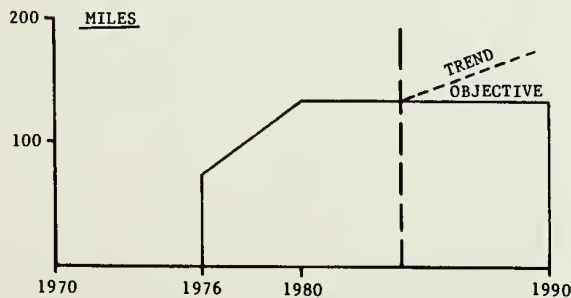
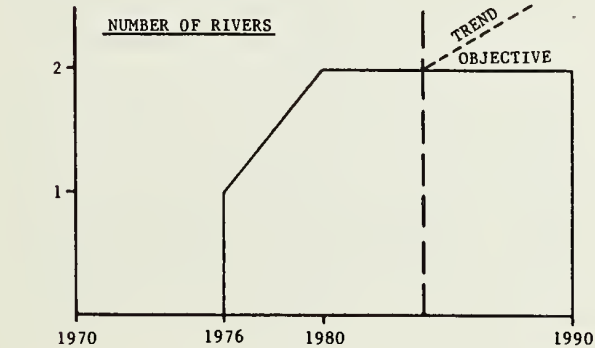
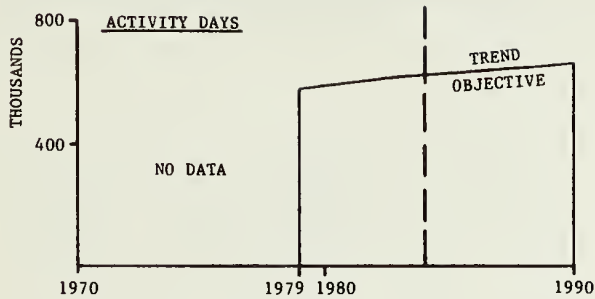
FUTURE. Our management objectives for recreational waterways must continue to relate to our objectives for sportsman access, boating, and the fish and wildlife programs. We will try to use our resources to benefit the widest possible number of users without compromising quality and diversity.

We must preserve waterways from resource exploitation threats. However, our long range objectives will need clarification as the State Supreme Court and Legislature continue to define the limits of recreational use on the state's waterways. Funding sources may be needed if additional programming, regulation, access, or facilities become necessary if user impacts increase.

OBJECTIVES BY 1990

REGION	YEAR	ACTIVITY NO. OF		MILES
		DAYS ¹	RIVERS	
1	1984	82,485	0	0
	1990	88,467	0	0
2	1984	114,055	1 (Blackfoot)	76
	1990	120,721	1	76
3	1984	139,975	0	0
	1990	148,945	0	0
4	1984	158,415	1 (Smith)	61
	1990	170,313	1	61
5	1984	78,155	0	0
	1990	83,501	0	0
6	1984	29,278	0	0
	1990	30,991	0	0
7	1984	30,223	0	0
	1990	31,990	0	0
STATEWIDE	1984	632,586	2	137
	1990	674,928	2	137

¹ 1984 data from 1983 SCORP non-resident canoe/in river and resident river floating participation tables.



PROBLEMS
Our role, objectives, criteria, and priorities need definition.

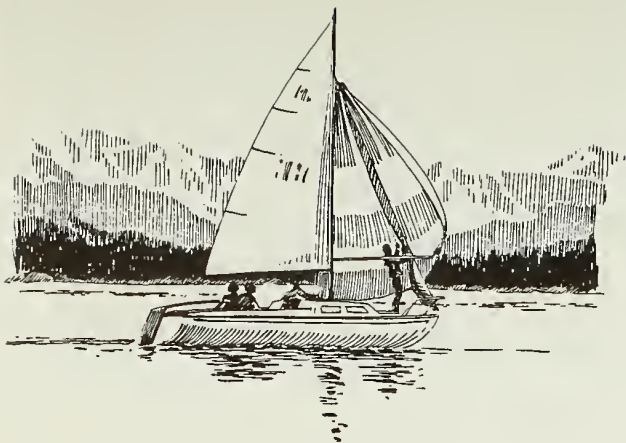
Resource exploitation threatens in-stream values.

No funding source is available.

Public access is needed to avoid conflicts.

The public is not aware of existing opportunities.

<u>STRATEGIES</u>	<u>Priority by Region</u>							<u>STATE</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
Review ARM rules and define the state's role.	-	1	1	6	1	-	1	2
Research and establish priorities.	1	7	2	-	-	-	-	5
Encourage appropriate legislation.	-	3	3	-	-	-	-	7
Delay acquisitions until goals are established.	2	-	-	1	-	-	-	-
Evaluate implications of proposed land use activities.	-	-	4	-	6	-	7	1
Inform public of implications of resource exploitation.	9	7	-	5	-	-	3	3
Establish and enforce public use regulations.	-	-	-	3	-	2	-	-
Determine an appropriate fee system.	6	-	5	7	-	-	-	4
Define, inventory, and publicize acquisition and funding needs.	3	4	6	-	4	3	2	-
Acquire by lease, easement, and land exchange.	4	5	-	2	5	4	-	-
Publish an adequate number of river guides.	8	-	-	8	3	-	4	6
Determine level of information officer effort needed.	-	-	-	5	-	1	-	8



Boating

OBJECTIVES BY 1990: To provide for an estimated 7 percent increase in activity days of safe boating; to increase the number of boat registrations by 40 percent; and to reduce fatalities from 14.2 to 3.2 per 100,000 boats, compared to 1984 levels.

Boating is a major recreational activity in Montana, with over 100,000 residents taking to our waters in motorboats, sailboats, rafts, canoes, and other vessels. The waters include more than 500 lakes and 15 major rivers, including the headwaters of the Columbia and Missouri rivers.

Our responsibilities include regulating and coordinating boating and promoting boat safety on all waters in Montana, while providing access and facilities in response to public demand. The boating element deals primarily with lake and reservoir use. However, a significant overlap occurs with fishing, waterfowl hunting, sportsman access, and recreational waterways.

STATUS. Historically, the U.S. Coast Guard was responsible for regulating recreational boating in the United States. The Boating Act of 1958 encouraged Montana to initiate boat registration. By 1975 we had registered over 22,000 boats.

Our 1978 strategic plan indicated that over 800,000 activity days were spent

motorboating, waterskiing, and sailing in 1976. By 1984 that figure increased to 1.2 million days involving more than 34,000 registered motorboats.

MANAGEMENT. Managing for boating means providing regulation, safety, facilities, and access. Our current efforts include:

1. Investigating accidents and joining search and rescue efforts with county sheriffs.
2. Coordinating coast guard auxiliary activities.
3. Providing information to boat shows and the news media.
4. Providing enforcement and safety patrols.
5. Initiating a boat safety program.
6. Providing motorboat access, ramps, and docks.

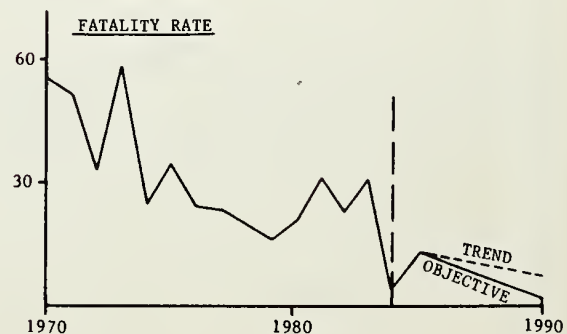
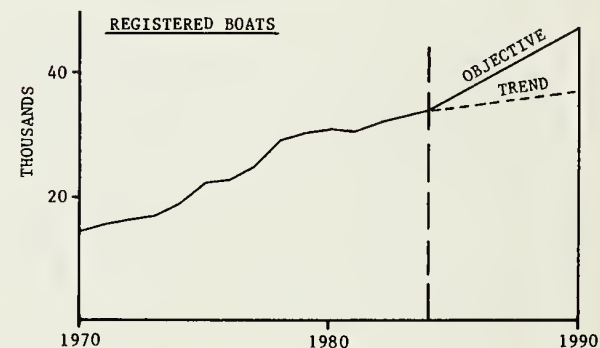
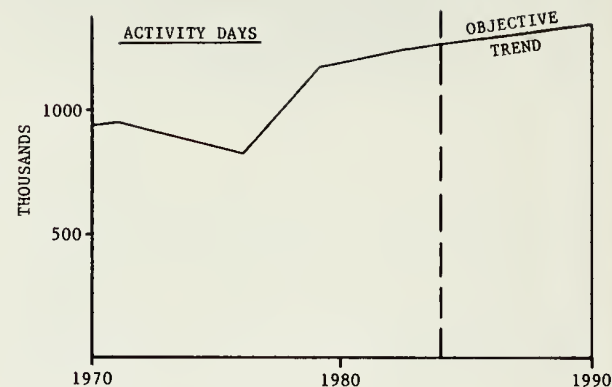
FUTURE. Thanks to additional funding provided through the new federal Wallop/Breaux Fund, we should be able to greatly increase our boat safety efforts,

improve motorboating facilities and increase our enforcement patrols to ensure compliance with safety regulations. We plan to do courtesy inspections and registration decal checks on one-half of all registered boats annually. We expect a violation level of 2.4 percent, or 24 violations for every 1,000 boats checked. These checks should help reduce the state's boating fatality rate from well above to well below the 1984 national average of 6.8 deaths per 100,000 boats.



OBJECTIVES BY 1990

REGION	YEAR	ACTIVITY DAYS ¹	REGISTERED BOATS ²	FATALITY RATE ³	DECAL CHECK RATE ⁴	COMPLIANCE RATE ⁵	ENFORCEMENT RATE ⁶
1	1984	259,855	9,268	0	595	47	78
	1990	270,681	12,908	3.2	500	12	24
2	1984	172,715	4,767	12.7	687	42	61
	1990	183,533	6,914	4.7	770	20	30
3	1984	178,640	4,041	0	970	13	14
	1990	191,888	5,536	3.2	500	12	24
4	1984	324,820	7,801	7.8	440	20	46
	1990	348,364	10,846	3.2	500	12	24
5	1984	171,140	4,472	13.6	960	47	48
	1990	181,148	4,697	3.2	500	12	24
6	1984	95,590	2,104	0	362	20	57
	1990	101,098	3,614	3.2	500	12	24
7	1984	80,731	1,951	0	367	16	43
	1990	85,448	3,485	3.2	500	12	24
STATEWIDE	1984	1,283,491	34,404	5.3	637	33	50
	1990	1,372,160	48,000	3.2	500	12	24



¹Data from 1983 SCORP resident and non-resident boating participation tables, excluding rivers.

²1984 data from Registrar's Bureau, Montana Department of Justice (U.S. Coast Guard estimates 61% of all recreational boats are registered nationwide).

³Fatalities per estimated 100,000 recreational boats (national average was 6.8 for 1984).

⁴Number of registration checks per 1,000 registered boats.

⁵Number of registration violation reports per 1,000 registered boats (national average is 20).

⁶Number of registration violation reports per 1,000 decal checks.



<u>PROBLEMS</u>	<u>STRATEGIES</u>	<u>Priority by Region</u>							<u>STATE</u>
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
The public is not fully informed about boat safety.	Increase seasonal public information efforts.	4	1	5	1	1	-	1	1
	Provide educational materials to dealers, caretakers, boat shows.	-	-	6	4	5	-	-	5
	Sign river hazards for boaters.	-	6	3	6	-	-	-	9
Existing facilities are inadequate.	Extend boat ramps for use at all water levels.	1	2	4	5	-	1	2	2
	Inventory existing boating facilities.	-	-	1	-	2	-	-	3
	Provide more facilities, such as boat camps and docks.	2	-	2	2	6	-	3	4
Many boats are not licensed because fines are low.	Utilize special enforcement patrols in high-use and low-compliance areas.	3	3	-	7	3	2	-	7
Enforcement personnel are not fully trained in boating safety.	Assign Coast Guard Safety Course graduates to conduct seminars.	-	4	-	-	-	-	-	6
	Utilize recognized expert instructors to conduct annual seminars.	5	-	-	3	-	-	-	-
Regional law enforcement programs are not fully implemented.	Develop and implement regional programs.	-	5	-	-	-	-	4	8
	Use special patrols where use and accidents are high.	6	-	-	-	4	-	-	-
Coast Guard Auxiliary units are not fully utilized or coordinated.	Coordinate with units and attend meetings.	-	5	-	-	-	3	-	-



Snowmobiling

OBJECTIVES BY 1990: To provide for an estimated 6 percent increase in activity days of safe snowmobiling; to increase groomed trail miles by 53 percent; to increase snowmobile registrations by 118 percent; and to reduce violations of snowmobile regulations by 95 percent over 1984 levels.

In only 20 years the sport of snowmobiling has grown from an obscure pastime to one of the most popular winter outdoor recreation activities in Montana and other snowbelt states. Our responsibilities include regulating riders, promoting safety, providing funding for plowing access roads and parking lots, grooming and marking trails, and providing information.

STATUS. Snowmobile use is increasing but fluctuates annually, depending on snow conditions. Snowmobile use statewide has been estimated at about 360,000 activity days for 1971, 570,000 for 1977, and 434,000 for 1984. Snowmobile registrations similarly

increased from nearly 17,000 in 1975 to over 27,000 in 1977, then dropped to about 15,000 in 1984. The fluctuation reflects snow conditions as well as a law change in 1979 that eliminated registration requirements for snowmobiles used on private lands.

MANAGEMENT. We provide trail grooming, access, and facilities for snowmobiling in consistently heavy snow areas and where demands are greatest near population centers. We also provide educational materials for safety and maintenance. Our registration decal checks determine numbers of machines and trail and area preferences.

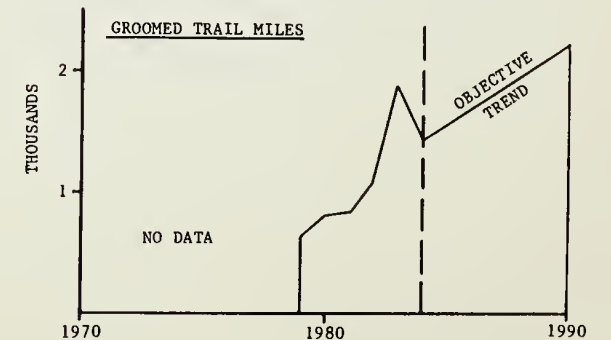
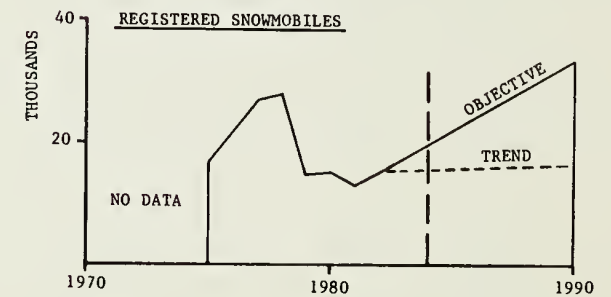
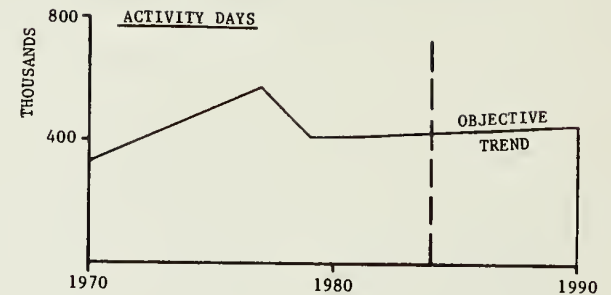
FUTURE. To provide facilities and grooming in the right amounts and places we must streamline our funding allocation system. We need less expensive, low maintenance trail grooming machines.

We'll expand snowmobile information and safety education efforts and schedule law enforcement patrols at popular times and places for safety checks, decal checks, and reduction of wildlife conflicts. We plan to contact the riders of nearly half of all registered snowmobiles annually. We expect a violation level of 2.1 percent, or 21 for every 1,000 checked.



OBJECTIVES BY 1990

REGION	YEAR	ACTIVITY DAYS ¹	REGISTERED SNOWMOBILES ²	GROOMED TRAIL MILES/ PLOWED PARKING AREAS	DECAL CHECK RATE ³	COMPLIANCE RATE ⁴	ENFORCEMENT RATE ⁵
1	1984	57,345	1,558	260/0	431	30	67
	1990	60,999	3,081	350/0	220	10	45
2	1984	72,090	2,352	455/10	696	20	29
	1990	76,278	6,028	1000/15	500	30	75
3	1984	57,655	4,486	508/2	1,189	1	0
	1990	61,201	8,745	508/2	471	10	21
4	1984	105,905	3,720	220/2	215	5	24
	1990	112,151	7,960	350/2	471	10	21
5	1984	44,675	2,191	15/0	239	5	21
	1990	47,275	4,565	15/0	471	10	21
6	1984	53,037	533	0/0	66	8	114
	1990	56,080	1,638	0/0	471	10	21
7	1984	44,125	780	10/0	73	3	35
	1990	46,670	1,983	26/3	471	10	21
STATE-WIDE	1984	434,832	15,620	1468/15	580	8	41
	1990	460,654	34,000	2249/22	471	10	21



¹Data from 1983 SCORP resident and non-resident snowmobiling participation tables.

²1984 data from Registrar's Bureau, Montana Department of Justice.

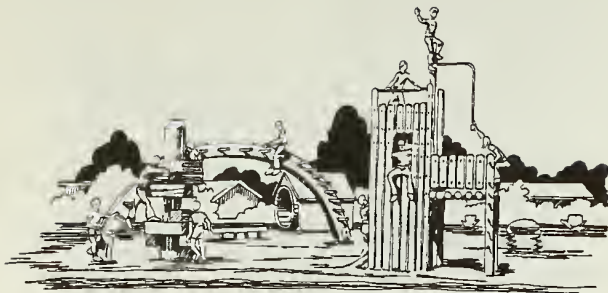
³Number of registration checks per 1,000 registered snowmobiles.

⁴Number of registration violation reports per 1,000 registered snowmobiles.

⁵Number of registration violation reports per 1,000 decal checks.



<u>PROBLEMS</u>	<u>STRATEGIES</u>	<u>Priority by Region</u>							<u>STATE</u>
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	
We need to increase our capability to provide groomed trails, facilities, and services.	Explore ways to provide and maintain trail groomers.	1	2	7	6	1	-	2	1
	Depend more on other agencies, local clubs, and volunteers.	2	3	6	1	2	2	-	4
	Provide more access and facilities on federal and department lands.	-	-	5	-	-	-	3	-
We need to adjust our distribution of funds.	Streamline and make the system more relevant and useful.	-	4	-	3	3	-	1	8
Many snowmobiles are not registered.	Change registration law (to include use on private land) or gas tax law (to increase enforcement funds).	-	1	3	-	-	-	-	2
	Increase enforcement contacts using roving patrols and ex-officio.	3	5	1	2	-	3	-	6
	Inform users of regulations and program benefits.	4	-	4	7	7	-	4	7
	Improve program acceptance among department employees who deal with the public.	5	-	-	8	5	-	-	3
The public is not fully informed about safety and facilities.	Increase public information efforts.	6	6	-	5	-	-	5	5
	Provide trail, regulation, and credit signs and maps.	-	-	2	4	-	-	-	-
	Communicate program needs and accomplishments.	-	7	-	-	4	-	-	9
Technical and administrative services are becoming inadequate.	Communicate program needs and accomplishments.	-	7	-	-	4	-	-	9
Snow conditions are not dependable.	Provide facilities and information on best snow areas.	-	-	-	-	6	1	6	-



Community/Statewide Recreation

OBJECTIVES BY 1990: To increase the number of LWCF projects that have been funded by 20 percent; to increase the number of acres acquired for outdoor recreation by 7 percent; and to increase our per capita amount spent for recreation projects by 32 percent over 1984 levels.

In 1965 we were designated as the state outdoor recreation agency. We were given the responsibility to provide federal Land and Water Conservation Fund (LWCF) 50 percent matching grants for community and statewide recreation areas and facilities. Since then we have assisted with the acquisition and development of community parks, playgrounds, swimming pools, golf courses, and state recreation facilities. We helped plan for statewide recreation needs through the Statewide Comprehensive Outdoor Recreation Plan (SCORP).

STATUS. Montana has received more than \$28 million from LWCF since 1965. With the required 50 percent match, this has resulted in more than \$56 million being spent to provide 666 projects and 72,623 additional acres of land for recreation.

In 1984, funds totalling \$675,096 allowed acquisition and/or development of 29 community recreation projects. The 1983 SCORP completed a 5-year effort to continue eligibility for further LWCF assistance.

MANAGEMENT. The LWCF is a matching grant program. Our policy is to split 50-50 the LWCF dollars we receive annually between state agencies and other political subdivisions.

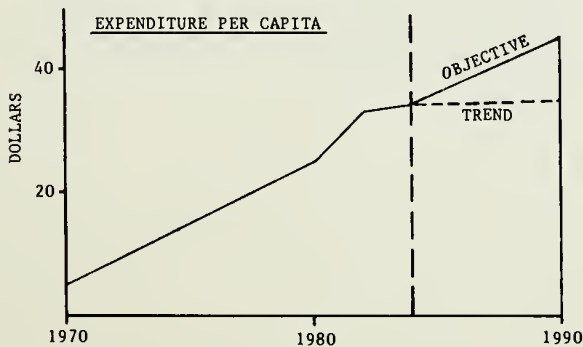
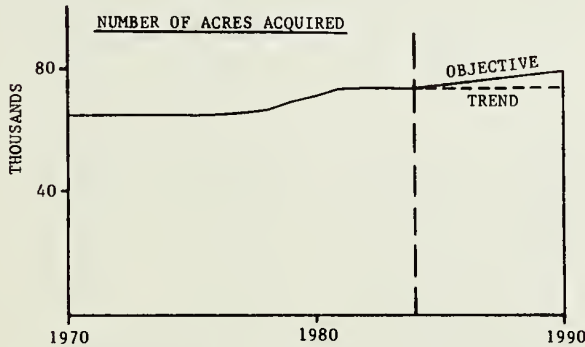
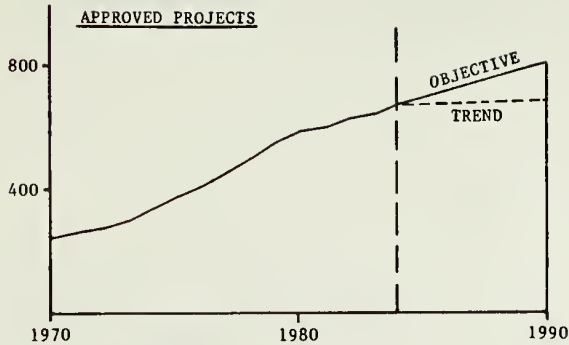
Potential project sponsors with plans for acquiring or developing public outdoor recreation areas are encouraged to apply for assistance. The Department ranks projects and allocates funds by priority.

FUTURE. We must continue to receive federal funding for the LWCF program to accomplish our objectives. Changing federal policies have drastically curtailed these grants to all states. In 1989 the LWCF program is scheduled to "sunset" unless Congress acts. We are coordinating with the newly created Presidents Commission on Americans Outdoors (PCAO) through the efforts of the Governor's Forum on Montanans Outdoors. We will continue to work with local communities to improve our distribution of these funds.

OBJECTIVES BY 1990

UNIT OF GOVT	YEAR	APPROVED PROJECTS	ACRES ACQUIRED	EXPENDITURE PER CAPITA ¹
LOCAL	1984	424	2,290	\$ 19.14
	1990	500	3,000	25.00
STATE	1984	242	70,333	15.04
	1990	300	75,000	20.00
TOTAL	1984	666	72,623	34.17
	1990	800	78,000	45.00

¹1984 data based on cumulative expenditures (\$28,127,544) divided by 1984 population estimate (823,000) times 56% local projects and 44% state projects.



PROBLEMS

Federal funds have been drastically curtailed.

Communities do not have matching dollars.

Incomplete applications reduce funding chances.

Incomplete billings lengthen turn-around time.

Funding distribution formula lacks selection criteria for state projects.

Department employees are rarely involved in the program.

STRATEGIES

Maintain Department support for grants program.

Increase congressional delegation efforts to get funding levels restored.

Increase community support through statewide Governor's Forum issue development meetings.

Make local governments aware of recreation benefits.

Provide workshops in application procedures.

Provide technical assistance.

Add selection criteria for State Park System projects.

Increase awareness and communication.

Request information officer involvement in Governor's Forum meetings.

PRIORITY

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Recreation Roads and Trails

OBJECTIVES BY 1990: To develop measurable objectives; to increase our management of areas approximately tenfold; and to assist in providing for an estimated 6 percent increase in activity days of use over 1984 levels.

Some of the fastest growing areas of participation in outdoor recreation are related to the use of roads and trails in Montana. Popular activities include back-packing, hiking, cross-country skiing, wilderness and primitive recreation activities, motor-cycling, off-highway and off-road driving, and pleasure driving.

STATUS. These activities accounted for nearly 15 million activity days in 1982, according to our 1983 SCORP plan--more than any other Parks Program element. The figure accounts for 68 percent of all Parks Program uses combined. Almost all the use occurs on roads or trails already established, and often built and maintained, by other agencies for transportation rather than recreational use.

MANAGEMENT. We formally manage one area within this category, the 32-mile-long Missouri River Recreation Road near Craig. We also informally assist in coordinating user groups whenever possible. Plans call

for designating and managing at least ten trails within existing Park System sites by 1990.

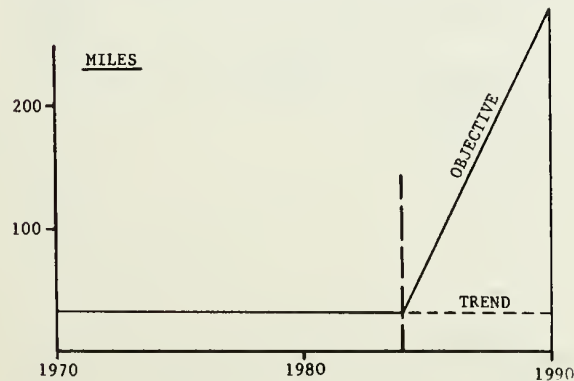
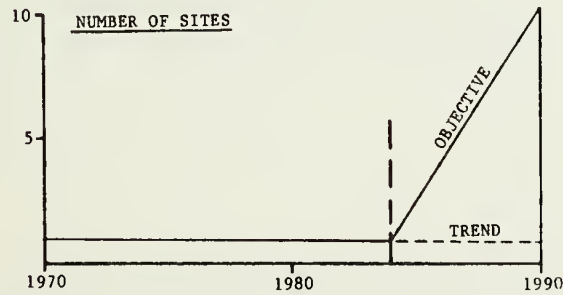
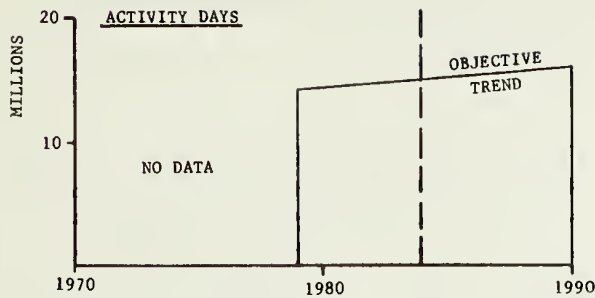
FUTURE. Public lands and roads have been the mainstay of recreational road and trail programs. Now, however, we are more often being called upon to provide facilities and access for recreation in conjunction with

public transportation systems. We also recognize that these activities depend more on scenic, wildlife, and recreational resources than on facilities. We try to monitor resource exploitation and lessen impacts wherever and whenever possible. We will better define our role and seek the money and flexibility to start cooperative programs with public agencies and user groups.

OBJECTIVES BY 1990

<u>TYPE</u>	<u>YEAR</u>	<u>ACTIVITY DAYS¹</u>	<u>NO. OF SITES</u>	<u>MILES</u>
ROADS	1984	6,177,695	1 (Missouri River)	32
	1990	6,535,262	1	32
TRAILS	1984	9,017,300	0	0
	1990	9,599,313	10	250
TOTAL	1984	15,194,995	1	32
	1990	16,134,575	11	282

¹Data from 1983 SCORP resident and non-resident road and trail activities participation tables.



PROBLEMS

Our role, objectives, criteria, and priorities lack definition.

We need funding sources.

Trailheads for winter recreation are needed.

Landowner incentives are needed.

Increased cooperation with other government agencies is needed.

Some abandoned railroad rights-of-way can provide recreation access.

STRATEGIES

Review ARM Rules and define the state's role.

Research and propose a program.

Delay activities until goals are established.

Present programs to clubs and public.

Find state and federal revenue sources.

Develop a "park and ski" pass program.

Provide signs, fencing, regulations, and enforcement for developments.

Use tax incentives, conservation easements, or direct payments.

Establish formal opportunities for staff interaction on issues.

Develop acquisition program.

Priority by Region

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>STATE</u>
Review ARM Rules and define the state's role.	2	1	1	7	1	-	1	1
Research and propose a program.	4	2	2	1	3	-	2	2
Delay activities until goals are established.	1	3	-	9	2	-	3	3
Present programs to clubs and public.	-	9	3	-	-	-	-	-
Find state and federal revenue sources.	6	4	4	2	4	-	-	4
Develop a "park and ski" pass program.	3	5	9	6	7	-	-	6
Provide signs, fencing, regulations, and enforcement for developments.	7	7	8	8	6	1	-	7
Use tax incentives, conservation easements, or direct payments.	5	6	7	4	5	-	-	-
Establish formal opportunities for staff interaction on issues.	8	-	5	3	8	-	-	5
Develop acquisition program.	-	8	6	5	9	-	4	8



State Capitol Complex Grounds

OBJECTIVES BY 1990: To provide for an estimated 37 percent increase in days of capitol grounds use; and to better fund the program by requesting about a 5 percent per year increase in order to maintain user satisfaction comparable to 1984 levels.

The 1983 Legislature designated us as the state agency responsible for grounds maintenance around the state capitol. Funding for this element is currently provided by a 5c per square foot assessment on all the state buildings within the complex.

MANAGEMENT. Since grounds maintenance is seasonal, we contract most of it to private businesses, providing necessary supervision.

STATUS. Well-maintained grounds are a focal point for state capitol visitors from throughout the country. It was estimated that in 1984 over 900,000 people viewed or used these grounds--nearly twice as many as visited all of our state parks that year. A survey taken after our first season of maintenance indicated that 88 percent of the state agencies were well satisfied with our work.

FUTURE. We continually reassess our methods as we gain experience. Maintenance objectives are clarified and better coordinated with building expansion plans. High maintenance areas are reviewed for cost-saving approaches. Winter safety and accessibility are high priorities, as are providing information and relieving parking congestion for visitors.

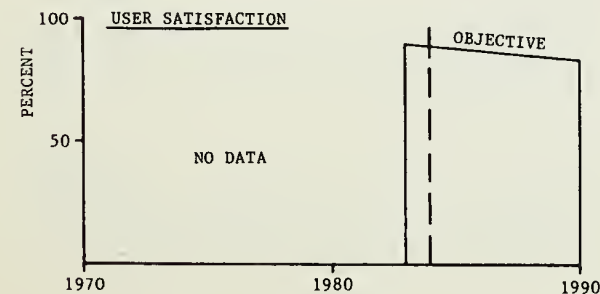
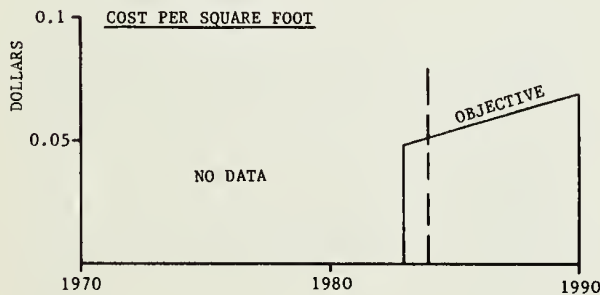
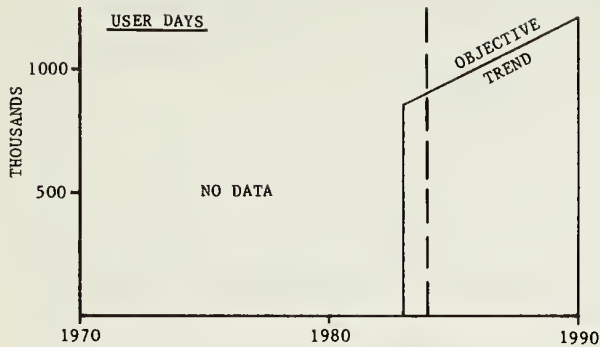
OBJECTIVES BY 1990

<u>YEAR</u>	<u>USER DAYS¹</u>	<u>COST PER AREA SQ. FT.²</u>	<u>USER SATISFACTION³</u>
1984	909,500	.05	88%
1990	1,249,720	.07	85

¹Data for 1984 based on Montana Department of Administration estimate of 3700 employees x 5 days/week x 49 working weeks/year + 300 business visits/day x 5 days/week x 52 weeks/year + 4 tour bus visits/day x 40 visitors/bus x 100-day season + 70,000 Historical Society visits/year + 500 legislative visits x 100-day season ÷ 2 years/session + 10,000 visits to special functions.

²Area square feet figures available from General Services Bureau, Montana Department of Administration.

³User satisfaction for 1984 based on November, 1983 Grounds Maintenance questionnaire, Parks Division, Montana Department of Fish, Wildlife and Parks.



PROBLEMS

Maintenance objectives unclear and uncoordinated with Complex expansion.

Some flower and shrub beds have high maintenance costs.

Snow and ice reduce access and safety.

People want more information about the Capitol Complex.

Many people have complained about tourist congestion.

STRATEGIES

Coordinate plans and cost estimates with Capitol Improvement Plan for additions and repairs.

Establish rational formula for revolving account assessments or replace with legislative appropriation.

Provide funding for grounds with building repairs or expansions.

Redesign plant beds and provide edging.

Repair, modify, expand, and vandal-proof irrigation system.

Establish low maintenance flower beds and contract growing and planting with State Prison.

Consider using private contractors for snow removal.

Locate free or low-cost snow dump sites.

Develop signs and brochures for use at public places.

Modify parking, vehicular, and pedestrian circulation patterns.

PRIORITY

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***Montana Department of
Fish, Wildlife & Parks***

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